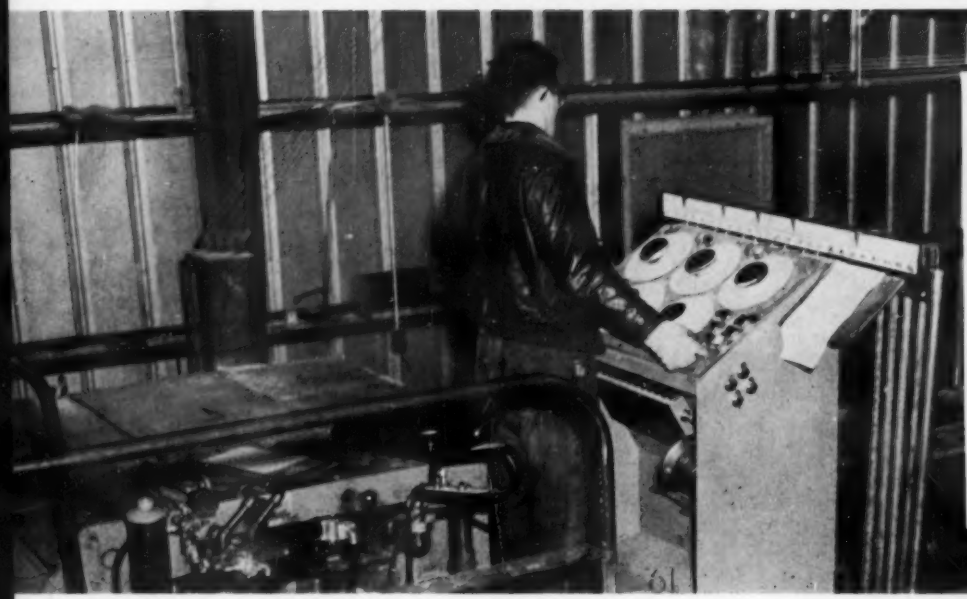
JUNE 1960

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING



3 Men Produce 40M per Shift

in automated, "packaged" Mayo Lumber Co. mill... head sawyer... edgerman ... trimmerman.

Page 36

Medium Sized Operation Rounds Out Utilization

with plywood lay-up plant. At recent opening of Hult Lumber Co. plywood plant in Junction City, Ore. — Julius Hult, founder of the 54-year-old firm, right, visits with Arthur Priaulx, West Coast Lumbermen's Association, who chairmanned the event.

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4 Technicians Control Production of Board

at highly automatic particle board plant in New Hampshire.

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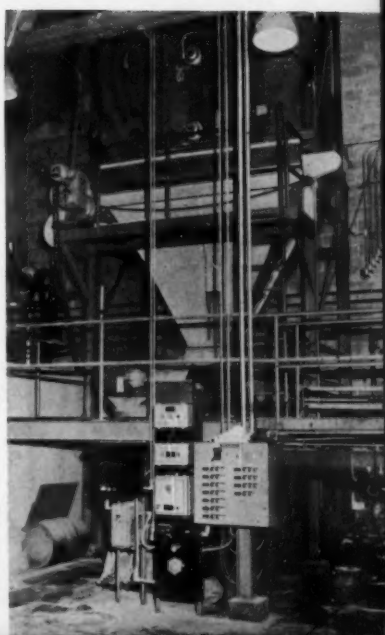

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1960 CHEVROLET STURDI-BILT TRUCKS

CHEVROLET

VOLUME 87 • NUMBER 6

JUNE, 1960

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THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

News of Importance. Union Bag-Camp Paper Corp. is studying plan to purchase Crossett Co. for about $156 million. American Can Co. is negotiating to purchase Allison Lumber Co., Bellamy, Ala., for a reported $20 million. Aberdeen Plywood & Veneers, Inc., purchases Harbor Plywood Corp., Hoquiam, Wash., for $9.5 million. **6**

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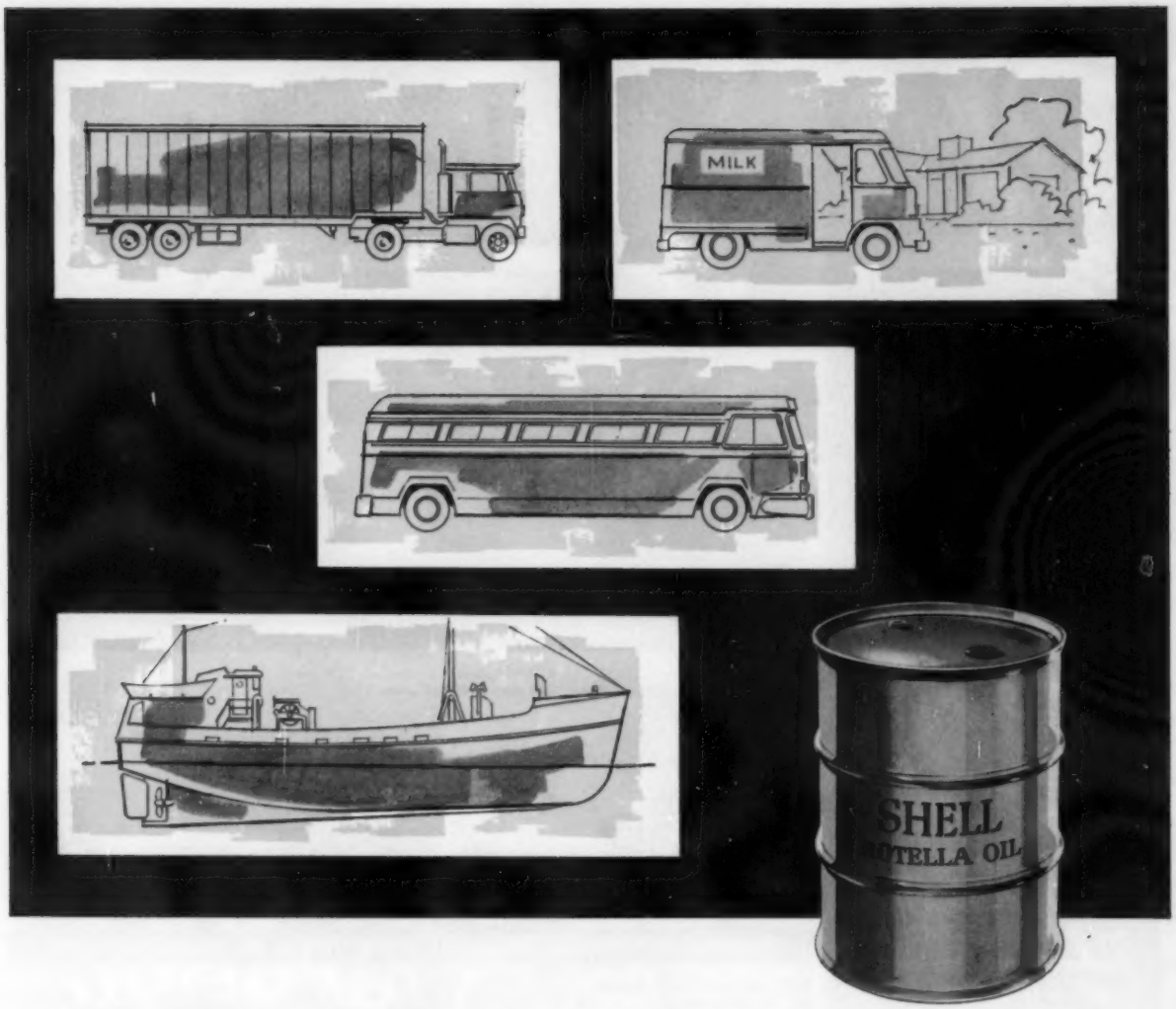

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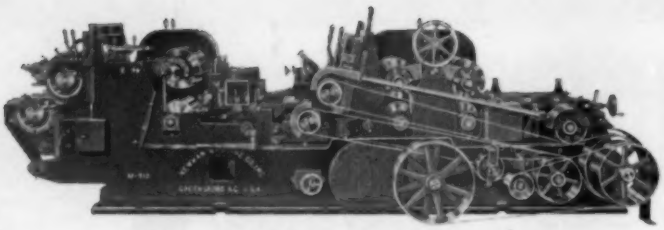
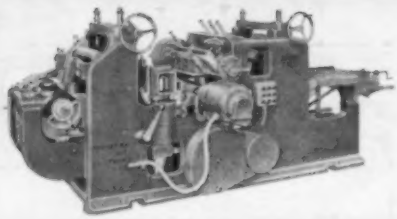


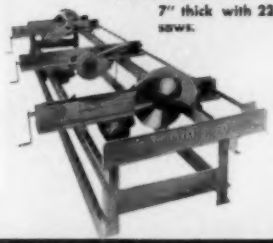
M-512 Planer & Matcher capacity 16" x 8" Feeds to 425 FPM. 8 or 10 knife heads. Six 12" dia. feed rolls

EXTREME ACCURACY ACHIEVED BY CLOSE TOLERANCES



M-68 DMD. 6 roll all electric Planer & Matcher. Feeds to 175 FPM.

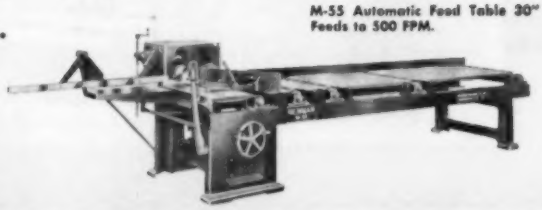
K-20 Double End Trimmer will trim from 5' to 20' lengths 7" thick with 22" dia. saws.



ALL ROTATING PARTS ARE DYNETRICALLY BALANCED

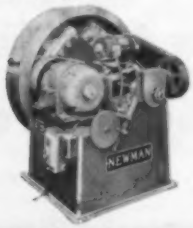
K-318 Multiple Rip Saw 12", 18" or 24" wide 4, 6, or 8 rolls.

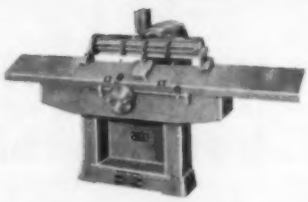
M-55 Automatic Feed Table 30" Feeds to 500 FPM.



THOROUGH TESTING THROUGH EACH PHASE OF MANUFACTURE

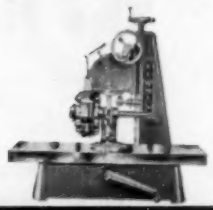
G-20 Automatic Knife Grinder. Full rotating action.





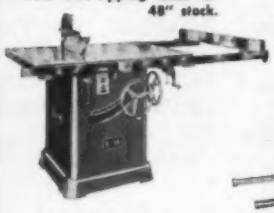
G-132 Automatic Knife Grinder. Max. 32" length. 8" width.

G-71 Grinder for Molder, Side and Profiler heads.

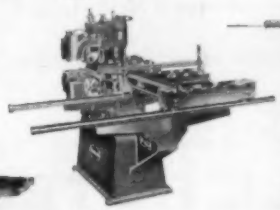


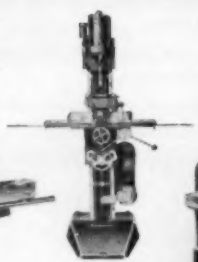
OVER 50 YEARS OF ENGINEERING PROGRESS

K-16 Tilting Arbor Variety Saw with ripping fence for 48" stock.



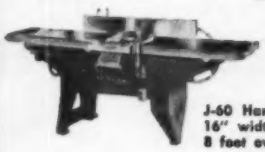
P-624 Single End Tenoner for sash, blinds, doors, furniture and cabinet work.





T-20 Hollow Chisel Mortiser. 1/2" cap.

P-620 Single Surfacer will plane 20" wide 1/8" to 6" thick.



J-60 Hand Jointer 12" or 16" widths, ground tables 8 foot overall.

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significant industry news

General Outlook...

UNION BAG MAY BUY CROSSETT . . . Crossett Co. and Union Bag-Camp Paper Corp. have agreed to preliminary terms under which Union Bag would purchase the 2,279,540 outstanding common shares of Crossett for about $156 million. The agreement is dependent on arrangement of financing satisfactory to Union Bag and also upon an investigation by Union Bag of Crossett's operations and properties. If the purchase is consummated, it would occur towards the end of 1960. Crossett operates a major forest products manufacturing center in Crossett, Ark., producing lumber products and pulp and paper. It owns more than 560,000 acres of prime pine timberland in Arkansas and Louisiana and recently announced plans to build a $6 million particle board plant. Union Bag indicates it would form a separate company to commercialize the timber assets.

PACIFIC COAST TO SELL TIMBER . . . Almost all of its timber holdings, estimated to be worth $9.7 million, will be sold by Pacific Coast Co., San Francisco, Calif., president Hugh J. Jacks announced in mid-May. The potential buyer is not identified. A stockholders meeting will be called in June to seek approval of the sale. Mr. Jacks says sale of the timber will place the company in a position to make acquisitions or mergers.

MAJOR ALABAMA SALE PENDING . . . Negotiations are underway for sale of Allison Lumber Co., Bellamy, Ala., to American Can Co. The reported $20 million transaction would include about 125,000 acres of some of the state's best timberlands and a sawmill at Bellamy cutting 120,000 feet a day. American Can in 1957 purchased Marathon Corp. which operates Marathon-Southern Corp., a paper producer at Butler, Ala. Acquisition of the Allison timber would provide Marathon-Southern with an excellent supply of timber, all within 40 miles of its plant. Allison has for many years maintained an extensive reforestation program which should supply the pulp mill for an unlimited period.

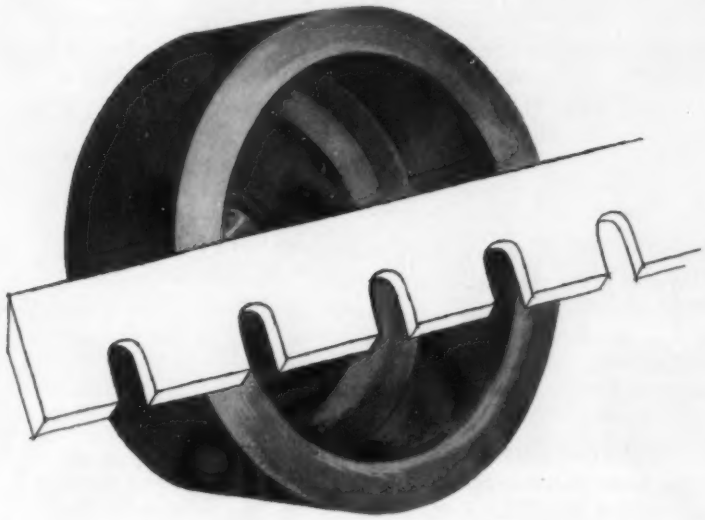
HARBOR PLYWOOD SOLD . . . Aberdeen Plywood & Veneers, Inc., Aberdeen, Wash., has purchased Harbor Plywood Corp. for $9.5 million. The purchase includes the plywood plant in Hoquiam, inventory, and a string of 18 warehouses across the country. The latter acquisition was the most important item. In the transaction, Harbor takes 76,666 shares of Aberdeen stock, valued at $1,500,000, as the purchase price for the mill and property. Harbor also received an 8-year option to purchase an additional 12,949 shares at $15 a share. Aberdeen will close the Hoquiam plywood plant to make extensive alterations, then resume production.

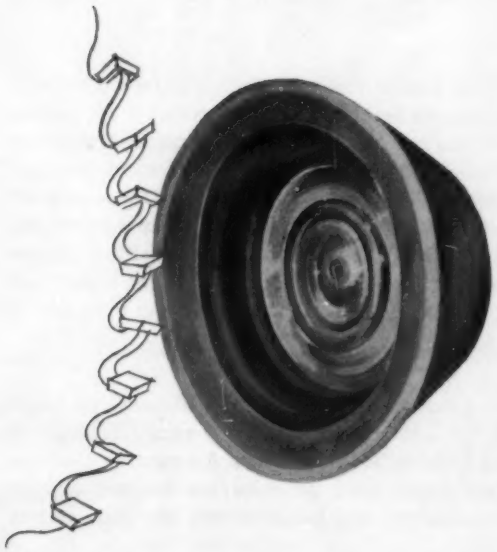
INTERIOR B. C. DEVELOPMENT EYED . . . MacMillan, Bloedel & Powell River Ltd. is looking to the interior of British Columbia for future expansion, it was reported at the company's annual meeting. No property was mentioned, but S. M. Simpson, Ltd., Kelowna, one of the largest lumber-plywood operations, has been discussed in this connection. MacMillan, Bloedel & Powell River recently purchased the $20 million Sidney Roofing & Paper Co., Burnaby. J. V. Clyne, chairman of the board, said the purchase fitted into the company's program of diversification in the field of packaging.

More INDUSTRY NEWS on Page 8

For all your sharpening jobs...

NORTON makes all the right wheels





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NEW PLYWOOD FIRM IN ARKANSAS . . . Mooney Plywood, Inc. has been established to take over operation of the Owosso Manufacturing Co. plywood plant at Benton, Ark. Paul Mooney, president of the firm, also operates Hardwood, Inc. and Arkansas Face Veneer Co. in Benton. Mooney Plywood took over the plant on a lease-purchase arrangement.

LUMBER FUTURES MARKET . . . A lumber futures market, similar to the Chicago grain "pits", has been proposed by Ewart A. Beveridge, formerly commodity economist of Merrill Lynch, Pierce, Fenner and Smith, Inc., according to McGraw-Hill's CONSTRUCTION DAILY NEWSLETTER. The National Lumber Manufacturers Association reports that Beveridge contends that such a market would protect a building contractor from being "squeezed" by rising lumber prices between the time his bid on a job is accepted and the time he actually needs the lumber. John W. Clagett, president of the New York Mercantile Exchange, was quoted by McGraw-Hill as stating his organization would help the construction industry set up such a market "if it can be shown that contractors need and want this type of price protection, and provided trading rules can be established which will protect both contractors and lumber suppliers."

MANUFACTURED HOMES PLANNED . . . Southern Pine Lumber Co., Diboll, Tex., will establish a manufactured home division at a yet to be selected site in central east Texas. It will be headed by Wilbert S. Johnson, a veteran in the home prefabrication field who was most recently with National Homes. Arthur Temple, Jr., president of Southern Pine, says local retail dealers will be one of the agents encouraged to distribute the house components.

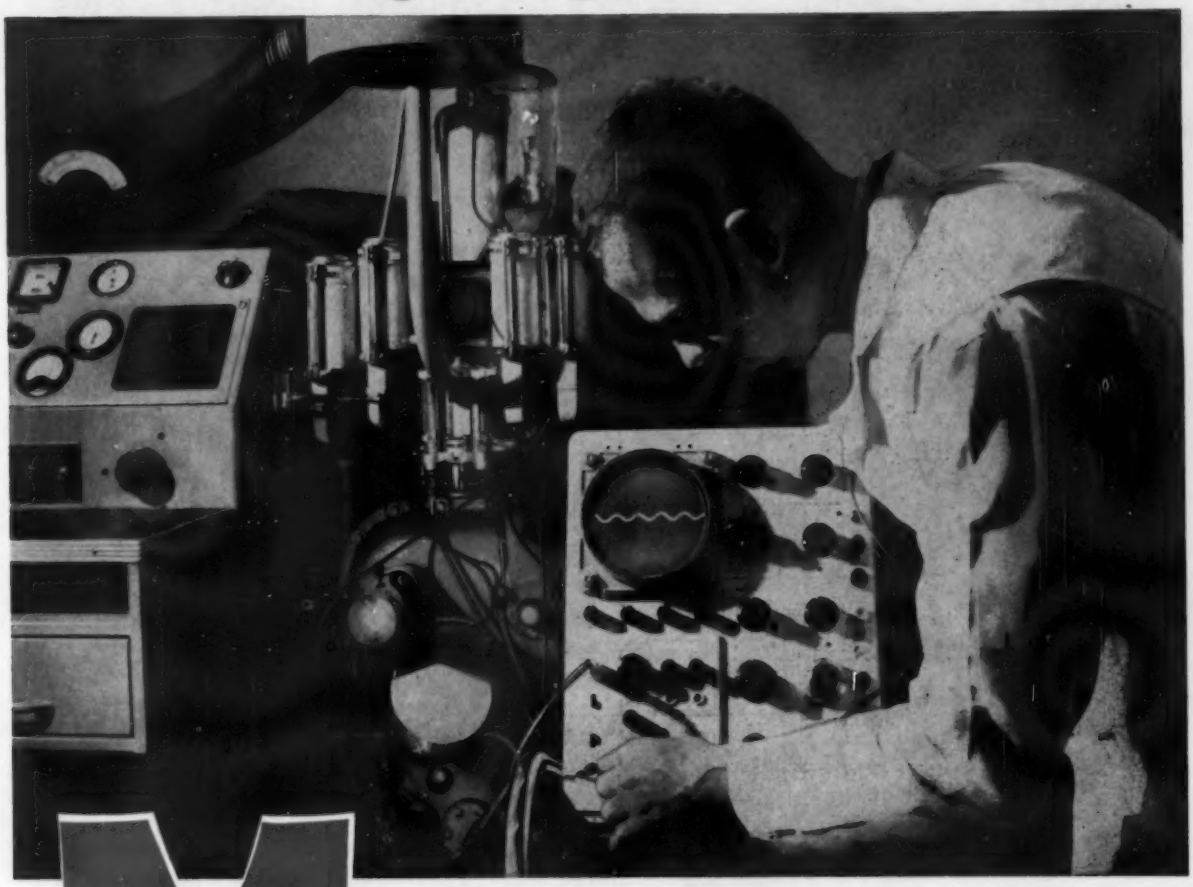
GAINS SEEN IN PREFABS . . . E. E. Kurtz, president of Inland Homes Corp., Piqua, Ohio, says the 12½% of the home building market now held by prefabricated structures, will probably double by 1970. Kurtz believes the best market for the prefab home producers is in the low price market. He cites an increase in the company's earnings in 1959 over 1958 and attributes it to a new prefab home unit selling for less than $12,000.

HARDWOOD PLYWOOD ACTIVITY UP . . . The United States hardwood plywood industry recorded shipments of 960 million square feet in 1959, an increase of 156 million square feet, or 19%, over 1958. Of this increase, 43 million square feet was new or increased production on the west coast. Hardwood plywood imports reached a record of 1.3 billion square feet vs. 905 million a year ago. These imports appropriated 59% of the domestic market. Imports from Japan totaled 801 million square feet, imports from the Philippines climbed to 214 million square feet. The Hardwood Plywood Institute says imported plywood from Japan and the Philippines, 89% of the total, is sold in the U. S. market for less than cost of production to domestic producers.

HOUSING GAIN PREDICTED . . . U. S. Housing Administrator Norman P. Mason says home construction will increase during the last six months of the year. He told the board of directors of the National Lumber Manufacturers Association meeting in San Francisco, Calif., that there might even be a buyers' market as 1960 draws to a close. The housing administrator also believes that mortgage money is becoming more plentiful.

More INDUSTRY NEWS on Page 10

Breakthrough in gasoline research!



Methyl

Standard brings industrial and commercial fleet owners the first new antiknock compound since Ethyl!

METHYL* has been tested in Standard research laboratories . . . and *proved* in more than 2½ million miles of road service and other field tests.

Methyl steps up octane performance so effectively that it stops power-wasting knock better than any other antiknock compound. Methyl means a power bonus and quieter performance for engines both old and new.

No other gasoline has anything like it. And it's in Chevron Gasolines—*at no increase in price!*

*Methyl—trademark for antiknock compound

CHEVRON GASOLINES

STANDARD OIL COMPANY OF CALIFORNIA

TRADEMARKS CHEVRON AND CHEVRON DESIGN REG. U.S. PAT. OFF.

ALABAMA CLIMBS TO SECOND IN TREE FARMS . . . Certification of 60 new tracts totaling 191,131 acres has boosted Alabama Tree Farm total to 1490 units covering 4,942,020 acres. This places Alabama above Georgia which has 612 units covering 4,810,394 acres.

SUPPLEMENT COVERS NEW GRADES . . . The Western Pine Association office at Portland, Ore., has issued a new 112-page supplement to its 1960 standard Western Pine lumber grading book. The addition covers new grading rules and new grade names for framing, joists, planks and roof decking, including stress grades. Many of the association mills have already switched over to the new grading rules, and more are making the move as fast as their mill graders familiarize themselves with the provisions.

WEYERHAEUSER SALES GAIN . . . Sales in the first quarter of 1959 totaled $108 million, up 8% from a year ago. The principal gains were in lumber. Net income for the period totaled $13.7 million, up 6.6% from a year ago.

On the Plant Front . . .

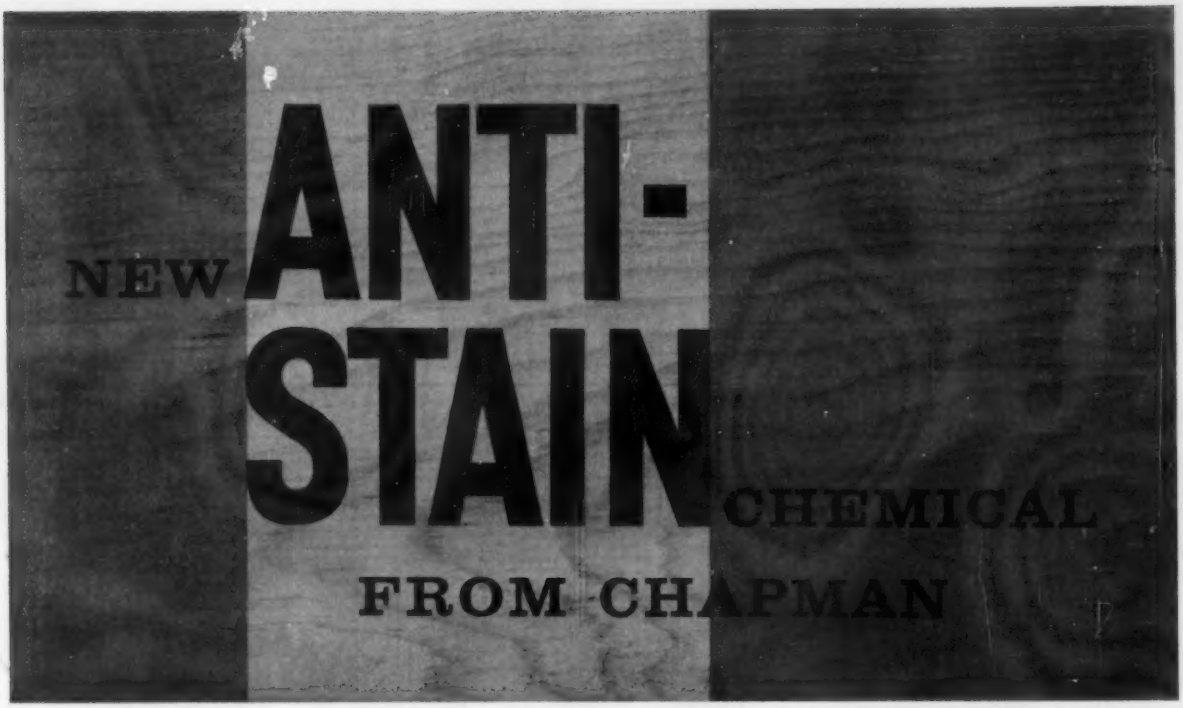
LOW COST PULP PLANT . . . Evans Products Co. is operating a pulp mill at Corvallis, Oregon, which was built for $1.5 million. The plant produces resin impregnated battery separators. A pulp mill at this cost offers opportunities for the sawmill operator to add another utilization unit at a cost comparable to a board or plywood plant. Recent developments in continuous digester equipment in the Northwest also offer opportunities for pulp plant installations at a lower cost.

INNOVATION IN PLYWOOD . . . Pacific Wood Products Co. will start construction immediately on a veneer plant in Everett, Wash. The company, which is a part owner of a lay-up plant in Walworth, Wis., has indicated it plans to construct 10 other such lay-up plants in major plywood consumption centers. The Everett plant would be the main source of dry veneer for the other plants. The firm plans ultimately to have three dryers, two veneer production lines and a lay-up plant at the Everett site. Green veneer from other plants will also be purchased.

OREGON HARDWOOD PLANT EXPANDS . . . A new sawmill, with planing and drying facilities, will be built near Dillard, Ore., for the production of hardwood lumber. The firm, Western Hardwoods, Inc., is currently operating a small plant in the area which will be continued. The new installation will have a capacity of from 20,000 to 25,000 a day, cutting alder, ash, oak and madrone. Plywood flitches also will be produced. Western Hardwoods is headed by Harry Johnson and his sons, Fred and Wilbur, and Byron Harmon.

END GLUING PLANT SET . . . Weyerhaeuser Co. will start construction immediately on an end-gluing plant at Snoqualmie Falls, Wash. Production is expected in September. The plant will produce Nu-Loc, using short, knot-free boards from adjoining lumber mills. The Snoqualmie plant is the fifth Weyerhaeuser unit to produce Nu-Loc. Other plants are at Longview and Raymond, Wash., and Springfield and Klamath Falls, Ore.

OREGON MILL REBUILT . . . Baker Lumber Mills, Inc., Baker, Ore., is operating in a new sawmill built to replace a unit destroyed by fire last November. The new band operation will have a capacity of 50,000 feet a day.



Permatox 10-S plus Bazide

controls both Enzymatic Brown Stain *and* Fungus Blue Stain *in white and sugar pine*

Now you can stop costly brown stain as well as blue stain in white and sugar pine with a single pre-mixed chemical product from Chapman.

New Chapman Permatox 10-S plus Bazide is a formulation developed through years of research into the cause and means of preventing the chocolate colored brown stain. It contains sodium azide with buffering agents, which effectively prevent this cause of lumber degrade, and sodium pentachlorophenate for fungus blue stain and mold control.

Effective combination—Effectiveness of the sodium azide portion of the product is increased by combining it with the sap stain control chemical. Thus, Permatox 10-S plus Bazide gives much cleaner lumber than does Bazide when used alone.

Possible savings in prevention of degrade are in the range of $15 to $20 per M when brown stain is controlled. This is in addition to the savings achieved when blue fungus stain and mold are also eliminated.

Easily applied—Permatox 10-S plus Bazide is easy to use. The convenient 10-lb. bag is mixed with water to make 100 gallons of solution. Application is by passing the freshly cut lumber through the green chain dip tank.

Start using Permatox 10-S plus Bazide now to get top value for your white and sugar pine lumber. Mail the coupon for complete information.

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MAIL FOR FACTS

Chapman Chemical Company
P. O. Box 138, Memphis 1, Tenn.

Please send complete information on use of Permatox 10-S plus Bazide.

Name_____

Company_____

Address_____

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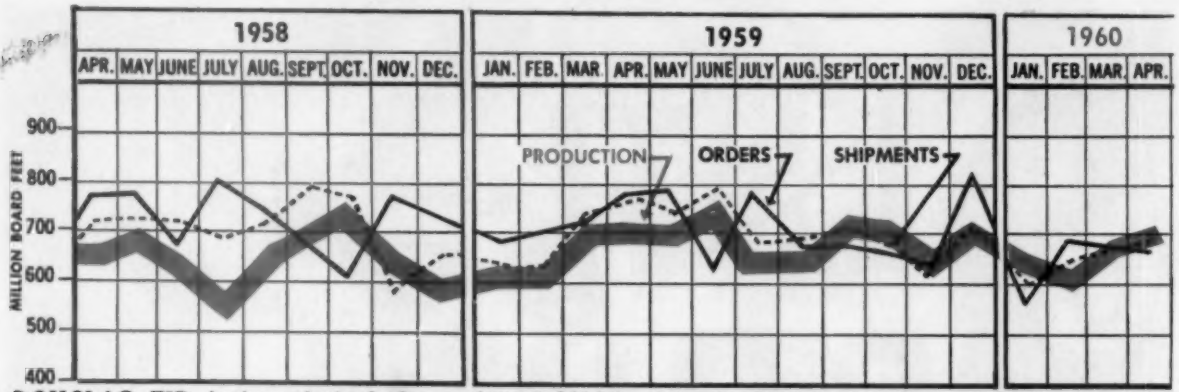
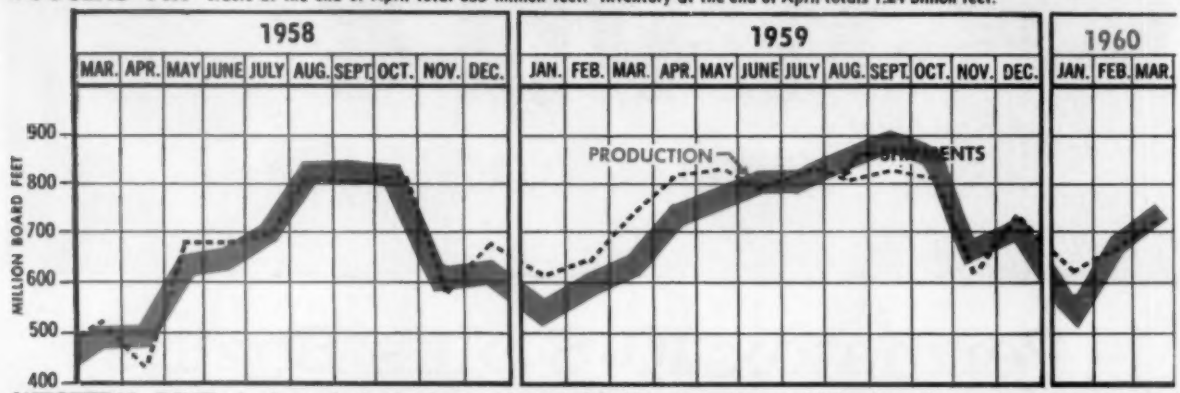
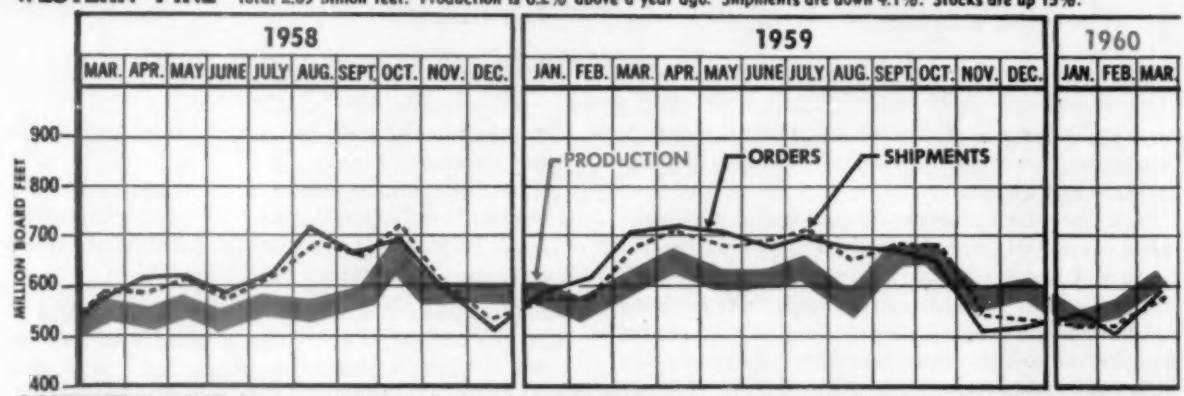
 More TRENDS on page 14



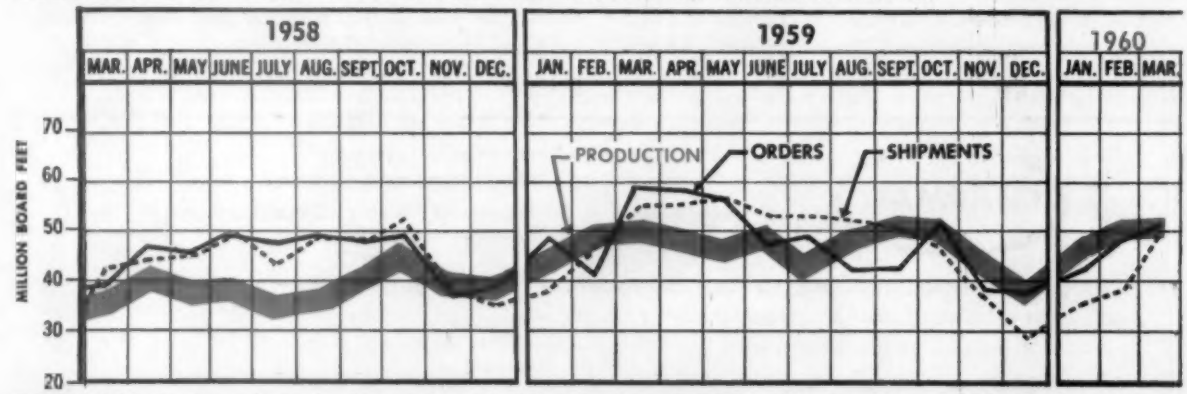
DOUGLAS FIR Lumber production for four months totals 2.91 billion feet, orders 2.61 billion feet, shipments 2.68 billion feet. Unfilled orders at the end of April total 633 million feet. Inventory at the end of April totals 1.24 billion feet.



WESTERN PINE Lumber production for three months totals 2.04 billion feet, shipments 2 billion feet. Gross stocks at the end of March total 2.09 billion feet. Production is 6.2% above a year ago. Shipments are down 4.1%. Stocks are up 13%.



SOUTHERN PINE Lumber production for three months totals 1.65 billion feet, shipments 1.61 billion feet, orders 1.63 billion feet. Unfilled orders at the end of March total 201 million feet. Gross stocks total 1.97 billion feet.



REDWOOD Lumber production for three months totals 158.3 million feet, orders 141.1 million feet, shipments 122.8 million feet. Orders on hand at the end of March total 81.7 million feet. Stocks total 416.4 million feet.

*Simonds new single crystal, friable aluminum oxide abrasive fractures *just right* under grinding pressure . . . to give you the coolest, fastest knife grinding you've ever experienced! Used in the finer grain sizes—46, 60 or 70, in soft grades—vitrified bonded. Typical specification—SA46-H8-V1. All segment shapes and sizes to fit all knife grinder chucks. Ask for SA Borolon segments for best grinding results.

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Fir plywood missed a firm first quarter market by only 8%. An 8% cut in production would have placed orders about 3% above output and kept a stronger foundation under prices. There might have been no $64 low.

New orders could have been kept above production, even with a 5% increase in panel output over the first quarter of 1959. But the actual 14.4% increase was too great for the market to withstand. An 8% cut in production, which totaled just over two billion square feet, would have put it at 1.92 billion square feet compared to first quarter orders of 1.97 billion square feet. A bigger cut in output would, of course, have created an even stronger market.

Despite the surplus that was manufactured, and the sag in prices, plywood sales and promotion organizations did a creditable job in relation to lumber, as the table below shows:

FIRST QUARTER PRODUCTION AND ORDERS

	Production Over 1959	New Orders Below 1959	1960 New Orders Below Production
Fir Plywood	14.4%	3.3%	5.5%
Southern Pine (SPA)	0.0%	13.0%	10.0%
Western Pine (WPA)	4.7%	10.3%	5.8%
Coast Fir (WCLA)	5.7%	8.4%	12.2%

Plywood imports to the United States at the end of two months are running 22.7% ahead of 1959, the Business and Defense Services Administration of the U. S. Department of Commerce reports. Major portion of imports is hardwood panels. The table shows totals in millions of square feet.

	Feb. 1960	Feb. 1959	Two Months, 1960	Two Months 1959
Japan	65.7	59.3	132	104
Canada	2.8	3.4	7.4	7.4
Finland	3.5	1.4	8.8	4.6
Philippines	10.3	12.5	24.9	26
Kaiwan	2.3	4.2	10	7.8
Total	94.7	88.1	205	167

British Columbia lumber operators are increasingly concerned by the growing dependence on North American markets. A few years ago, the bulk of the province's lumber exports went overseas, but last year Canada and the U. S. accounted for 75% of the coastal B. C. production.

In summarizing the B. C. lumber market, J. S. Johannson, president of B. C. Lumber Manufacturers Association, told the annual meeting that overseas business last year declined by 14% to 592 million feet, with substantial losses being recorded in the United Kingdom, Africa, and Australia.

Strong competition from Scandinavia and Russia forced B.C.'s U.K. shipments down by 21% to 267 million feet, the lowest volume exported to that market since 1950," said Mr. Johannson. "Sales largely comprise specialty items, and included the largest footage of cedar ever shipped to the U.K. in one year.

"As recently as 1954, Canada was the No. 1 supplier of softwoods to the U.K. Five years later she ran a very poor fourth."

On the credit side, Mr. Johannson pointed out, surprising gains were made in exports to India and South and Central America.

Canadian and U. S. markets were able to absorb 1.78 billion feet of B.C. lumber last year, but Mr. Johannson said that the B.C. industry would much prefer to have more diversified outlets for its products in the interests of stability.

Reintroduction of quotas by the Union of South Africa was largely responsible for a decline of 32% in sales to that country.

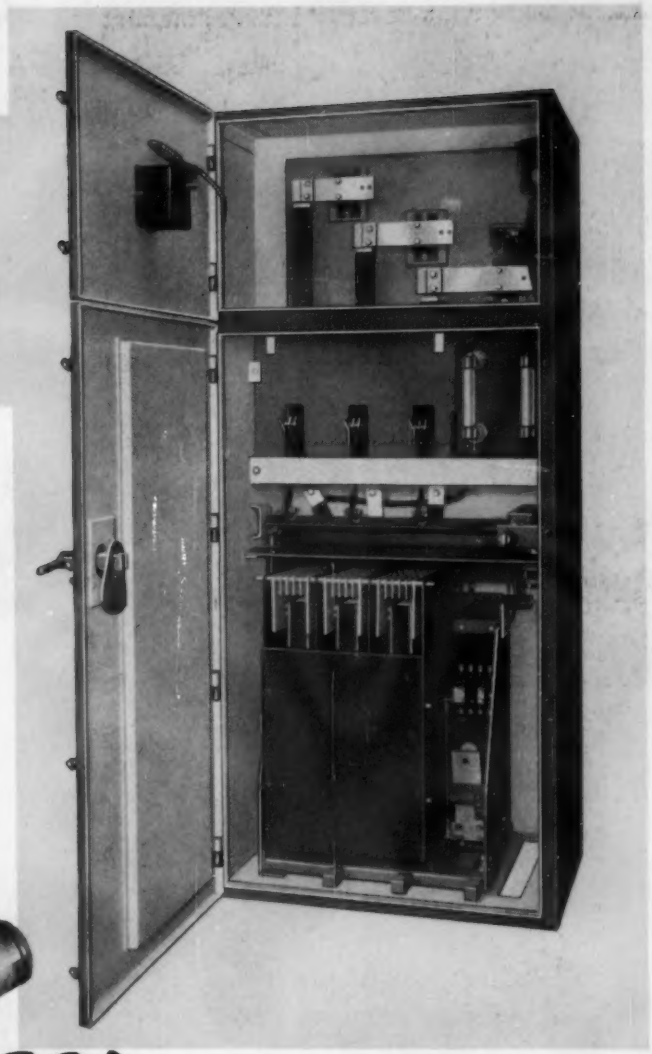
NEW EC&M STARTER

GIVES

100/150 MVA fault protection

WITHOUT

FUSES!



Proven by tests conducted by an independent testing station, EC&M's new "fuseless" ZHA air-break starter has a certified interrupting capacity of 100,000 KVA at 2400 volts, 150,000 KVA at 4800 volts. This starter is simpler and much more accessible for inspection and checking connections.

The ZHA starter is not subject to problems associated with fuses. Single phasing due to blown fuses is eliminated...no costly replacement fuses to stock.

For positive personnel safety, the ZHA is equipped with a 3-way doorlatch, interlocked between disconnect switch and contactor interlocking system. The disconnect switch is gang-operated. When the door is open, disconnect blades are *visible* in the open and grounded position.

No roll-out needed...phase barrier and arc-chutes draw out horizontally, making front and rear contact tips readily accessible. Bus bars are used for power connections throughout the starter. Redesigned arc-chutes and interphase barrier, and improved contactor are additional features which make the ZHA starter your logical choice for high-voltage motor drives.

***GET THE COMPLETE STORY** on certified fuseless fault protection for high-voltage motor drives. Write for Bulletin 8130*

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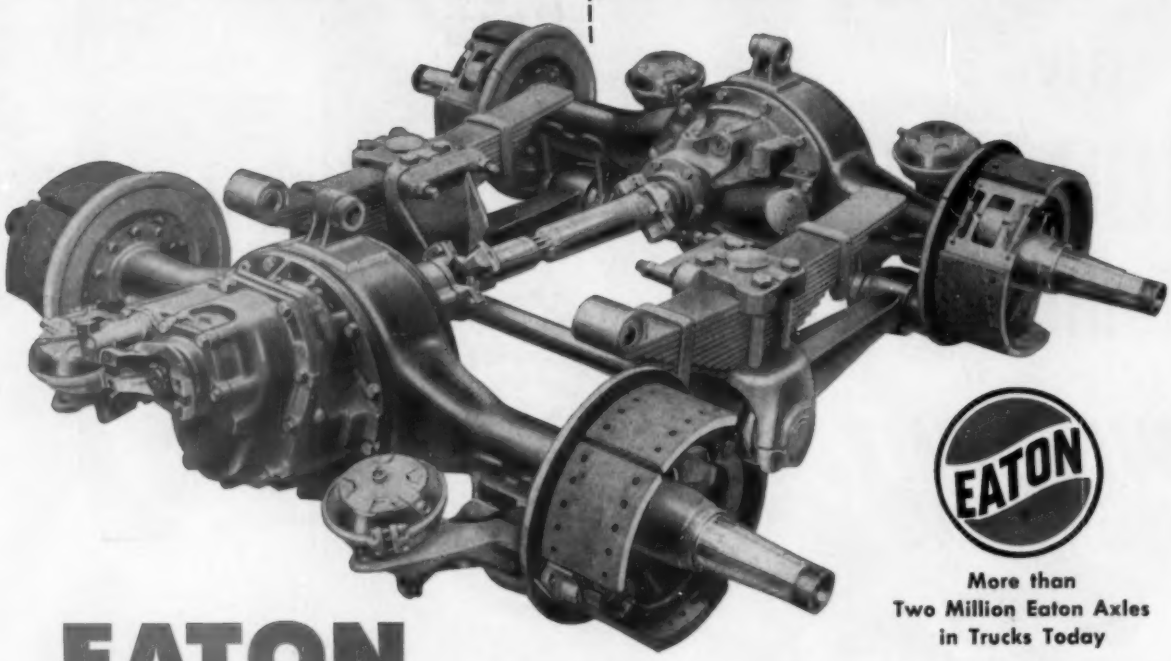

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Two new Eaton Tandem Axle models now extend the line of famous Eaton Tandems into a much wider range of vehicle capacities—from 38,000 lbs. GVW to 55,000 lbs. GVW.

Eaton Tandem Axles offer advantages not available in other tandems. Included are important savings in weight and over-all length with no sacrifice of stamina. These operation-proven axles may be selected from Single Speed, 2-Speed, and Double Reduction types. The 2-Speed and Planetary Double Reduction models provide the many advantages of Eaton's exclusive planetary gearing design—substantiated by billions of miles of economical, trouble-free service.

Ask your truck dealer to explain the 10 big benefits you get with Eaton Tandem Axles—and how they can make your hauling operations more profitable.

EATON

AXLE DIVISION
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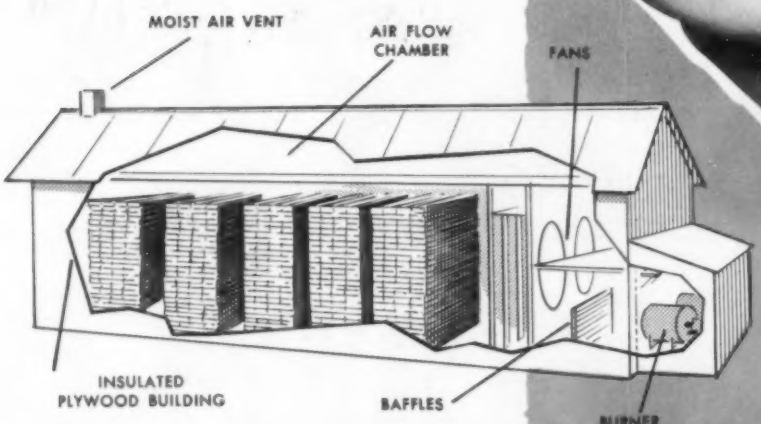
DIAMOND DRY KILNS
Reduce drying time 20%

CAN YOU AFFORD TO OPERATE A MILL WITHOUT A DIAMOND KILN?

45 Northwest Operators in the last 14 months have said "no" and purchased one or more Diamond Kilns

(One out of every three have come back for more.)



DIAMOND KILNS use *all* the heat, with cross circulation, re-circulation and reverse circulation.

Ask these DIAMOND OWNERS . . .

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Conifer Timber Company	Fortson, Wash.
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Paul B. Hult Lumber Company	Dillard, Ore.
Superior Building Co.	Columbia Falls, Mont.
Fort Garland Lumber Co.	Fort Garland, Colo.
Honolulu Dryers, Inc.	Honolulu, Hawaii
Hedlund Mills, Inc	Sandpoint, Idaho
Blue River Lumber Company	Blue River, B. C.
Seneca Lumber Company	Long Creek, Ore.
Eastlick Mills, Inc.	Yreka, Calif.
H. Pearson Lumber Company	Burns Lake, B. C.

. . . and many others. Write for names.

MAIL THIS CARD FOR FULL DETAILS

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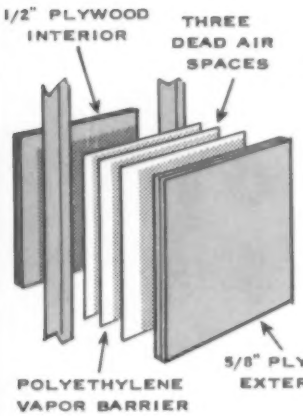
DIAMOND DRY KILN LUMBER

Kilns shown are drying shop grade alder to 7.2 to 8% moisture content in 185 hours!

ONE THIRD THE INITIAL COST... ONE HALF THE OPERATING COST!

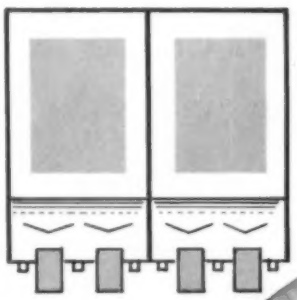
Here's Why:

- PRE-FABRICATED—you can easily erect it with your own crew.
- CONSTANT FLOW—revolutionary drying principle perfected by a lumberman for his own use . . . reduces construction and operating costs.
- COMPLETELY AUTOMATIC—requires one man's time only ½ to 1 hour daily.
- BETTER KD LUMBER—Diamond "Constant Flow" drying reduces end and surface checking, cracking and case hardening. (Falldown is ½ of industry average.)



LIFETIME KILN INSULATION

Allows Diamond Kilns to come up to average drying temperature faster, keeps heat loss to a minimum for entire drying cycle. Reduces fuel consumption and total drying cost.



THE SUPER KILN

New Diamond Super Kiln for even faster, larger capacity drying. Employs two burners and three fans in each kiln to speed drying cycle. Available, 100,000 and 200,000 bd. ft. capacities.

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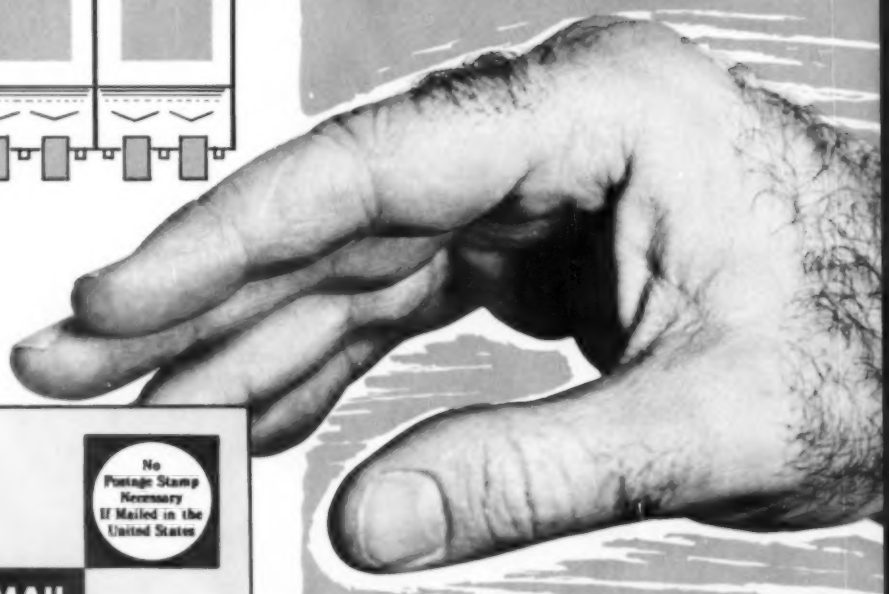

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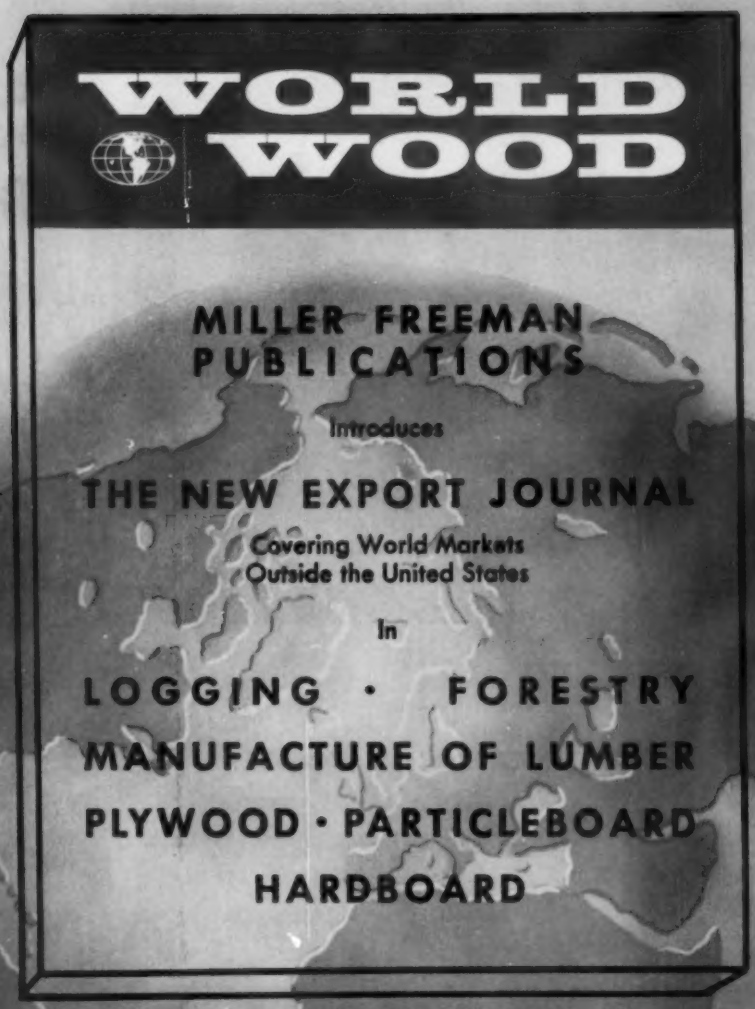


Published Jointly By

THE LUMBERMAN and THE TIMBERMAN

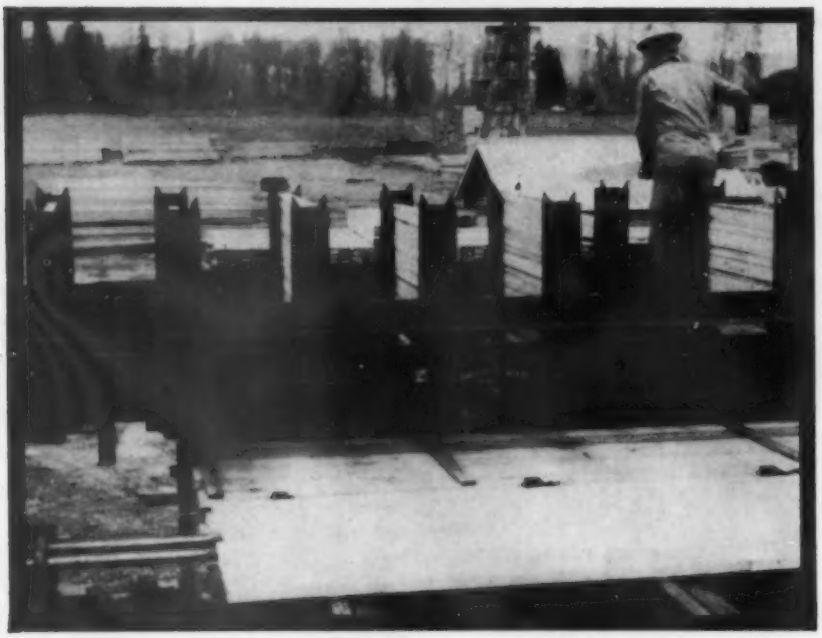
In announcing the new journal, WORLD WOOD, the need is recognized for an export magazine, circulating outside the United States, in all countries where the manufacture of forest products creates a market for machinery and supplies.

WORLD WOOD will be published August 25, 1960 (Advertising Closing Date: August 1), and its distribution will be among 8000 readers in more than 100 countries. Most of this distribution will be concentrated among some 6500 companies who comprise the world-wide export market outside the United States.

WORLD WOOD is a brand new publication and nothing like it has ever been available. It is made-to-measure for the United States manufacturer seeking to build or expand sales in the export field. The people reading WORLD WOOD will be those responsible for the raw material (logging and forestry), plus those responsible for the manufacture of lumber, plywood, particleboard, hardboard and other wood products. Manufacturers of machinery, equipment, services and supplies for these groups will find a ready and waiting market among the readers of WORLD WOOD.

The August issue is the inaugural issue and quarterly publication is planned for 1961. **For prompt servicing of your inquiries, phone the nearest Miller Freeman office . . . or write WORLD WOOD, 731 S.W. Oak Street, Portland 5, Oregon.**

Reserve space now in this first issue!



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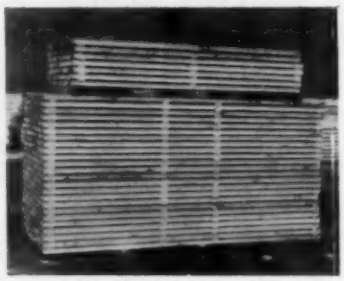
DESIGNED FOR USE WITH BOTH NEW AND OLD LAWSON STACKER INSTALLATIONS

The Lawson **Automatic** Stick-Placer . . . like all improvements to the Lawson Stacker . . . is specifically designed for installation with every stacker ever made by Lawson. This means that all Lawson Stackers can always be up-to-date. No matter how old your existing equipment, our constant developments for improved lumber handling are easily, simply installed . . . always assuring for the best, most economical procedures. If you are not using Lawson equipment now . . . you should! Lawson Stacker users can readily testify to the tremendous labor savings and the great reduction of their down grade thru the use of automatic stacking. NOW . . . the Lawson **Automatic** Stick-Placer offers even greater savings. Tolerances of sticker sizes are summed up . . . ANY STICKER THAT SHOULD BE USED . . . CAN BE USED! Insist of the LAWSON AUTOMATIC STICK-PLACER with . . . or for . . . your LAWSON STACKER. ANOTHER PRODUCT OF LAWSON'S Creative Engineering.



Look for releases on other new Lawson developments in the near future.

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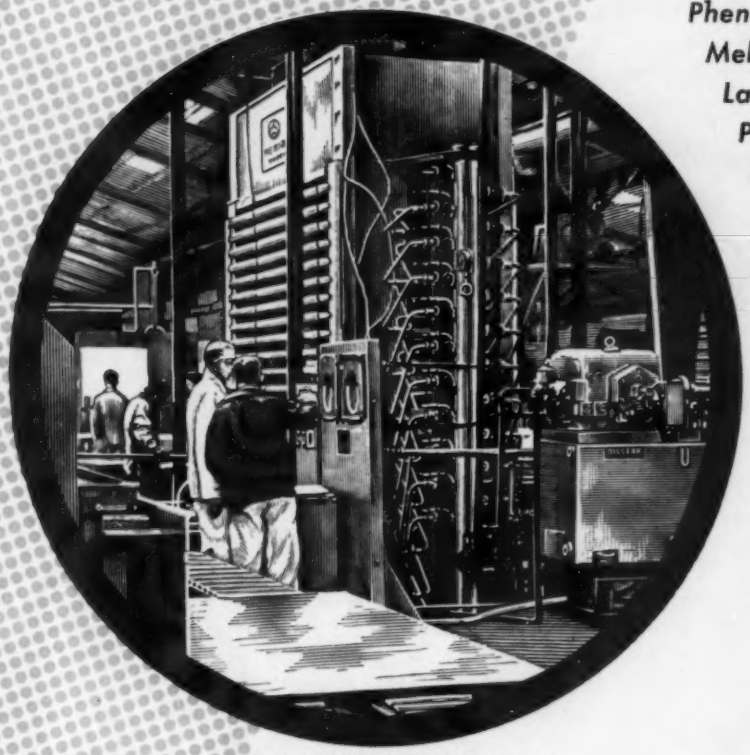

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rough cut

Three operations — rough cut — medium cut — finish cut — are necessary for each and every machined surface.

Ray Tallman, a Coe veteran employee of 30 years service, is making a rough or hogging cut on a knife bar casting using our big CINCINNATI "Hypro" open side planer. These will be followed by a series of medium cuts and finishing operations to obtain a perfectly true surface to receive the knife. It will then gleam like the circular way in the foreground.

These fine finishes at key points are essential to meet the high quality standards that are adhered to in all Coe machines in which

Quality IS OUR PRINCIPAL INGREDIENT

Removal of the tough outer skin of a casting relieves spot tensions built up when a casting cools and permits distortions. Therefore, finishing of some large castings such as the knife bar above, requires weeks or even months of aging between operations and months of effort by skilled craftsmen to obtain a stable casting.

These and other problems are part of the "know-how" necessary for building good machine tools.

COE

VENEER MACHINERY SINCE 1852

LATHES • CLIPPERS • DRYERS • KNIFE GRINDERS

The COE MFG. CO.

PAINESVILLE, OHIO PORTLAND, OREGON

"T5X... doing a remarkably good job"

Amos Quinlan, truck superintendent, Hudspeth Pine, Inc., Prineville, Oregon

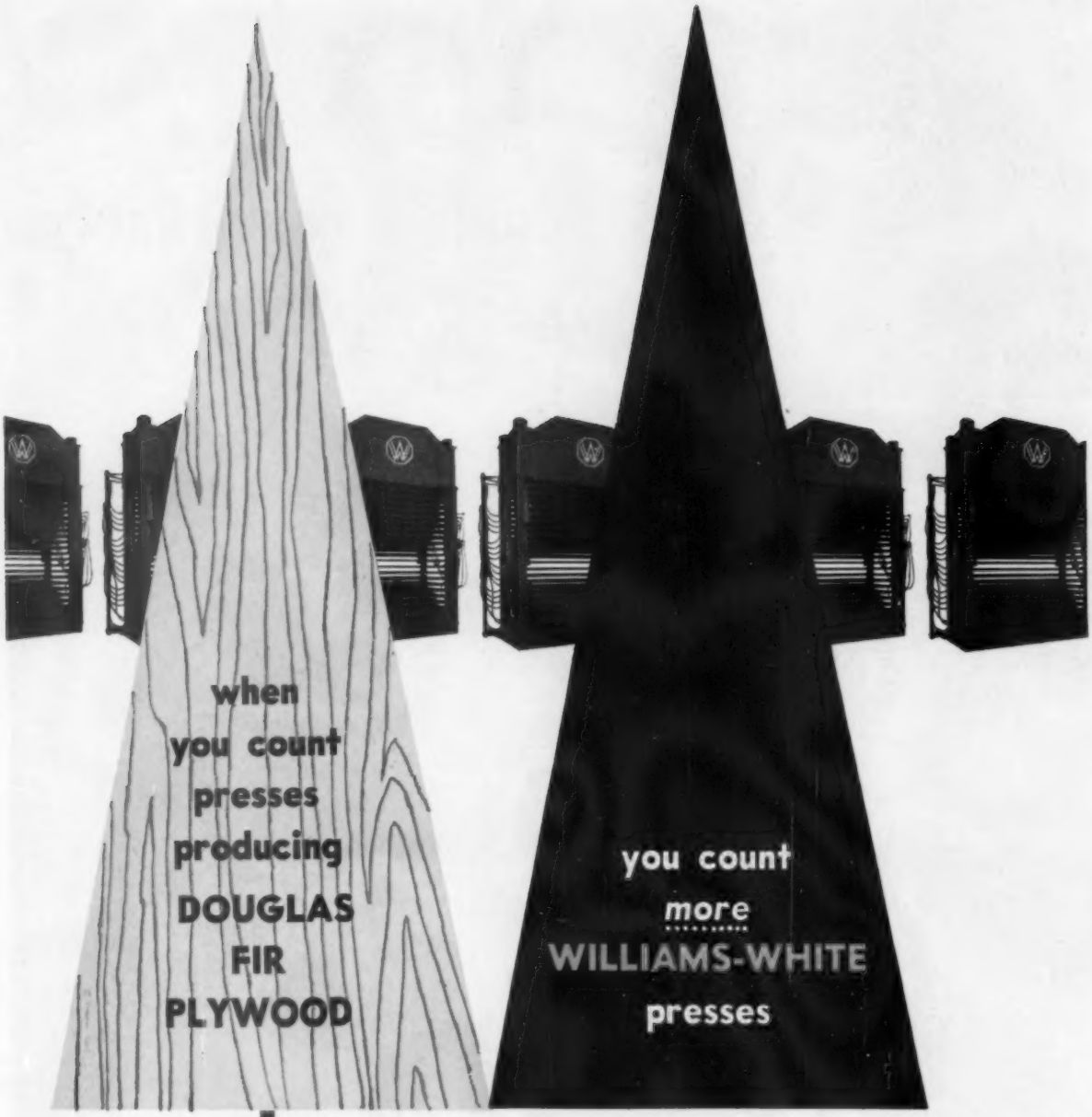
"T5X is in the crankcases of all trucks in my charge, including our logging fleet of thirty '57 Macks.

"Our average overhaul interval is 135,000 miles although this Mack I'm standing by has gone 142,000 (200,000 motor miles) with one set of head gaskets. Since using T5X we've never seen a worn bearing or scored crankshaft — engines look 'factory' clean, no sludge in the pans ever. *Yes, I'd say T5X is doing a remarkably good job for us.*"

T5X Motor Oil has achieved a record number of enthusiastic users among log truck operators everywhere. Start using this amazing purple motor oil this season and you'll soon find out why it's called *the finest.*

UNION OIL COMPANY OF CALIFORNIA 76

Union Oil Center, Los Angeles 17, California



WHY?

First, plywood producers recognize the name of Williams-White as that of an engineering leader for 106 years.

Secondly, Williams-White has pioneered most of the important design advantages of multiple-opening hot plate presses.

Third, your Williams-White press is custom-engineered to do exactly the job your production requirements demand.

The facts about Williams-White hot plate presses speak for themselves, and you'll find many of those facts in the free Bulletin Number 200-A. Write for your copy today.

107th year

WILLIAMS-WHITE & CO • 600 Third Avenue, Moline, Ill.

the measure of Performance Reliability for more than a century

SALES AGENTS: Portland, Oregon: Allied Northwest Machine Tool Corp.; **Seattle:** Perine Machinery & Supply Co., Inc.

"USS Steel Strapping and tools cut 'tie down' time by 60%."

reports J. W. Hanson, Plant Manager, Rilco Laminated Products, Inc., Albert Lea, Minnesota

"Each of these cars holds seven laminated wood arch sections which extend 25 feet over the end of the cars," explains Mr. Hanson. "Formerly each car required four sets of supports, and loading took 12 man-hours per car. Now that we are using USS Steel Strapping and Tools, we need only one support on a car, and two men load it in two hours. Besides saving money, we speed up delivery time. Unloading is faster, too!"

USS Flat Steel Strapping Tools eliminated the need for a wooden cradle, three sets of wooden supports, and ten man-hours of labor for constructing them. Now 2" x .050" Flat Steel Strapping applied with the conventional Model 48 Stretcher and the Model 50 Sealer secures cumbersome loads like this without danger of damage during long railroad hauls.

Our Strapping Specialists can offer you, from our Complete Strapping Service, the proper strapping and tools to fit your bundling, packing, palletizing or car-loading operation. Why not contact us for a demonstration that could help you cut shipping and handling costs!

USS is a registered trademark

Complete Strapping Service • Strapping • Tools • Technical Assistance

U.S. Steel Supply Division of United States Steel

Steel Service Centers and Complete Steel Strapping Service Coast to Coast

United States pulp and paper companies who either operate SUMNER Chippers or buy chips produced by them—

Alaska Lumber & Pulp Company, Inc.
Bowaters Southern Paper Corporation
Brown Company
Buckeye Cellulose Corporation
Cascade Kraft Corporation
Columbia River Paper Company
Coosa River Newsprint Company
Coos Bay Pulp Corporation
Crossett Paper Mills
Crown Zellerbach Corporation
Diamond National Corporation
Dierks Forests, Inc.
East Texas Pulp and Paper Company
Fibreboard Paper Products Corporation
Flintkote Company
Gaylord Container Corporation (Division of Crown Zellerbach Corporation)
Georgia Pacific Paper Company
Green Bay Paper and Pulp Company
Halifax Paper Company, Inc.
Hudson Pulp and Paper Corporation
Inland Empire Paper Company
International Paper Company
Ketchikan Pulp Company
Longview Fibre Company
Masonite Corporation
North Carolina Pulp Company
Olin Mathieson Chemical Corporation
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Puget Sound Pulp & Timber Company
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St. Regis Paper Company
Scott Paper Company
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Southland Paper Mills, Inc
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Waldorf-Horner Paper Products Company
Western Kraft Corporation
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. . . and more to come

Here's proof . . . of

SUMNER CHIPPERS

wide acceptance

These 42 representative pulp and paper companies plus many more in Canada and around the world are depending on over 500 SUMNER Chippers to furnish them with a continuous supply of high quality chips.

Sumner offers the widest range of types of chippers from the 36" disc diameter rechipper to the 175" log chipper—the world's largest.

Board plants, sawmills and veneer plants as well as pulp mills, have taken advantage of SUMNER'S many years experience in engineering and building chippers.

Write or phone today for the location of a SUMNER Chipper close to you.

SEE FOR YOURSELF WHY THERE ARE MORE SUMNER CHIPPERS THAN ANY OTHER MAKE IN OPERATION TODAY.

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EVERETT, WASHINGTON U.S.A.

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DESIGNERS AND BUILDERS OF MACHINERY FOR THE FOREST PRODUCTS INDUSTRIES

every [OK] veneer knife is *made-to-order*

They will meet the particular conditions of your mill, with temper, hardness and bevel exactly suited to your needs. That's why you can depend on OK veneer knives for better veneer.

You can lower your costs with OK veneer knives, too, because they stay sharp longer and require fewer regrindings. Special high alloy steel, produced exclusively to our exacting metallurgical standards, is used. Our special heat-treating methods produce edges of uniform hardness, with unequalled resistance both to ordinary wear and unusual nicking or breaking.

Precision grinding holds thicknesses to tolerances and parallelisms of ± .001, producing the straightest possible edges and matchless cutting uniformity. Get the whole story of made-to-order OK veneer knives by writing today without obligation to Dept. 61-R

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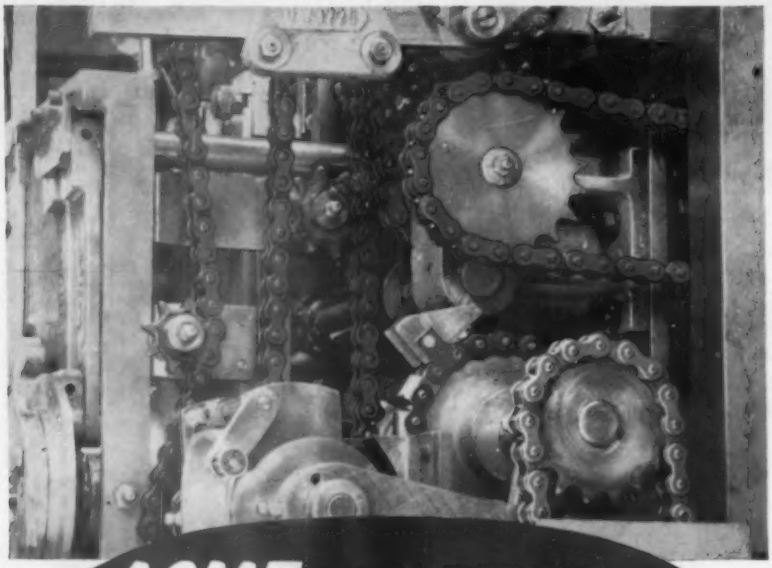
Manufacturers of PLANER KNIVES • VENEER KNIVES • CHIPPER KNIVES • HOG KNIVES

ROLLER CHAINS
THAT ARE STURDILY BUILT FOR THE LUMBER INDUSTRY



ACME GIVES THEM TO YOU

Every link in ACME roller chains have uniformity, toughness and durability to withstand the ruggedness of lumbermill operations. They have, for years, been tested in every type of installation that calls for speed, stamina and smooth operation. They are engineered for years of tough, trouble-free service . . . to handle the heaviest load under the most arduous operating conditions. Be sure to get the most for your chain dollars by specifying *ACME* chain.

Let ACME roller chains help you step up production and cut down power transmission cost. Consult your local ACME distributor, he has the full cooperation of ACME's Engineering staff.

Write Dept. 33-O for new 100-page illustrated technical catalog including new engineering section showing 36 methods of chain adjustments.

Acme Chain Corporation
HOLYOKE MASSACHUSETTS

COMPLETE LINE OF ROLLER CHAINS AND SPROCKETS • DOUBLE PITCH CONVEYOR CHAINS • STAINLESS STEEL CHAINS • CABLE CHAINS • FLEXIBLE COUPLINGS • STANDARD AND SPECIAL ATTACHMENTS

CALENDAR OF COMING EVENTS

JUNE

National Particleboard Association, semi-annual meeting, June 1-2, Brown Palace Hotel, Denver, Colo.

Western Red Cedar Lumber Association, June 1-4, Harrison Hot Springs, B. C.

Forest Products Research Society, June 5-9, Queen Elizabeth Hotel, Montreal, P. Q. (International).

Southern Sash & Door Jobbers Association, June 13-14, Hotel Peabody, Memphis, Tenn.

National Oak Flooring Manufacturers Association, June 15-16, semi-annual meeting, Peabody Hotel, Memphis, Tenn.

Western Dry Kiln Club, June 23-24, Hotel Florence, Missoula, Mont.

National Wooden Pallet Manufacturers Association, June 26-28, Chatham Bars Inn, Chatham, Mass.

JULY

National Plywood Distributors Assn., annual meeting, July 1-5, Sun Valley, Ida.

Philippine Mahogany Association, Inc., July 10-14, Wentworth Hotel, Portsmouth, N. H.

Appalachian Hardwood Manufacturers, Inc., July 14-15, summer meeting, Cavalier Hotel, Virginia Beach, Va.

AUGUST

Ponderosa Pine Woodwork, August 2-4, summer meeting, Fairmont Hotel, San Francisco, Calif.

Columbia River Log Scaling & Grading Bureau, August 8, annual meeting, Benson Hotel, Portland, Ore.

Forest Tree Nurseryman's Meeting, August 17-18, Savenac Nursery, Haugen, Mont.

TAPPI Forest Biology Symposium, August 24-26, New Washington Hotel, Seattle, Wash.

National Christmas Tree Growers Association, August 25-27, annual meeting, Purdue University, Lafayette, Ind.

Fifth World Forestry Congress, August 29-September 16, Seattle, Wash.

SEPTEMBER

Lake States Logging Congress, September 8-11, Rhinelander, Wis.

Northwest Hardwood Association, annual meeting, September 9-10, New Washington Hotel, Seattle, Wash.

Western Pine Association, September 14-16, semi-annual meeting, Multnomah Hotel, Portland, Ore.

American Ladder Institute, September 19-22, annual meeting, Grove Park Inn, Asheville, N. C.

OCTOBER

National Hardwood Lumber Association, annual meeting, October 3-6, Hotel Sherman, Chicago, Ill.

Hardwood Plywood Institute, October 5-7, Dinkler Plaza Hotel, Atlanta, Ga.

Architectural Woodwork Institute, October 11-14, Sheraton Park Hotel, Washington, D. C.

National Forest Products Week, sponsored by Hoo-Hoo International Wood Promotion Committee, October 16-22.

National Safety Council, October 17-20, Chicago, Ill.

Michigan Tractor Loggers reduce shatter 73%

"We were losing about 11% of our redwood due to shattering during unloading and decking," says Wayne Hulbert, owner of Hulbert & Muffly Co., Inc., Cloverdale, California. "Then, we got a pair of Michigan Model 175 Tractor Loggers. Now, with handling by the Michigans, loss due to shatter has been cut to less than 3%."

It's easy to figure what this saving means in extra profit when you consider the firm is currently sawing about 150,000 bd-ft per 16 hr day.

Even in soft footing, Michigan handles 20 ft log with ease.

Handles logs up to 10 tons

The Michigans' hydraulic clamp will handle a log up to 6 ft in diameter and has a lifting capacity of 20,000 lbs. Since most logs come into the Hulbert & Muffly yard measuring 48 inches in diameter and 16 to 20 ft long, size and weight are no problem.

Loading and unloading of both truck-trailers and rail cars—all feeding of the sawmill—both cold and live-decking are handled by the two Tractor Loggers. California law specifies a maximum truck load height of 12 ft. So, with their maximum lifting height of 11¾ ft, machines can unload even the biggest peaker logs. Feeding the 10 ft high sawmill platform is also an easy matter.

Mobility and versatility give additional benefits

"Rubber-tired, 27 mph mobility," says Mr. Hulbert, "has enabled us to increase our decking area. The 10 acre yard doesn't seem nearly so big anymore. Extra handling and truck moves have been eliminated. If we want to move a log a thousand feet or so, we just fetch it with the Michigan and go."

"The 165 hp Loggers also carry stripped bark to the burner. Also, by gripping a log, they act as dozers to smooth the yard. With quick-attaching 2⅝ yd buckets, they are used for graveling and backfilling, plus many other scattered chores."

Perhaps one of the two Michigan Tractor Logger models (2.85 and 10-ton lift capacities) could give you similar savings. Call us for a demonstration. No obligation, of course.

Michigan is a registered trademark of
CLARK EQUIPMENT COMPANY
Construction Machinery Division

CLARK EQUIPMENT

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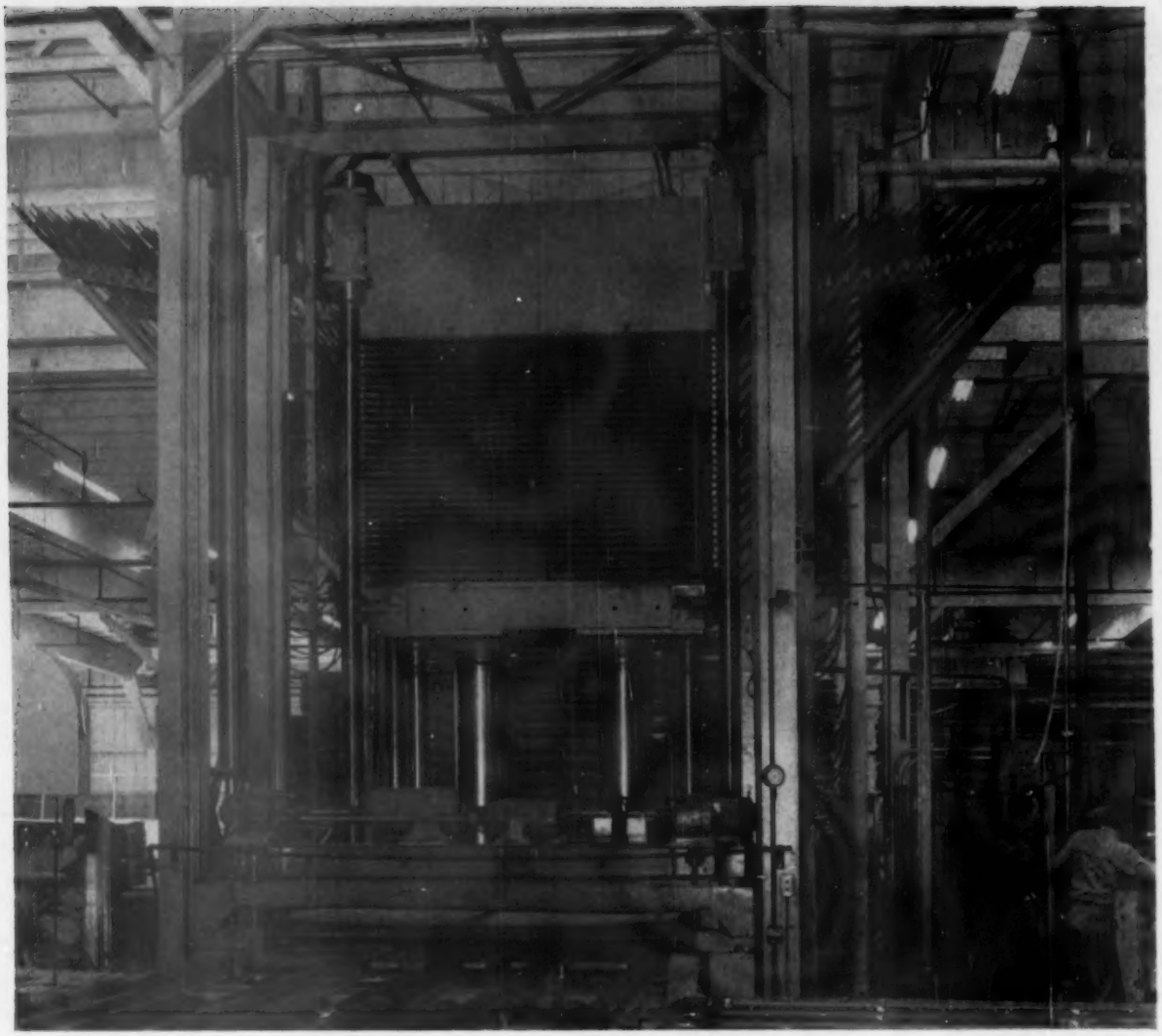
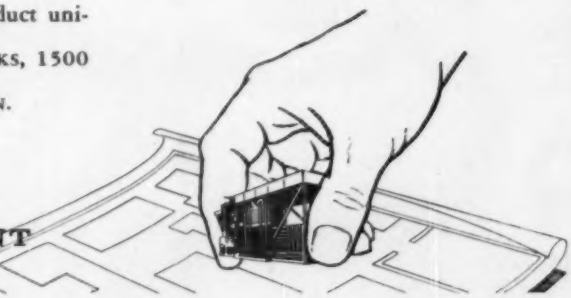
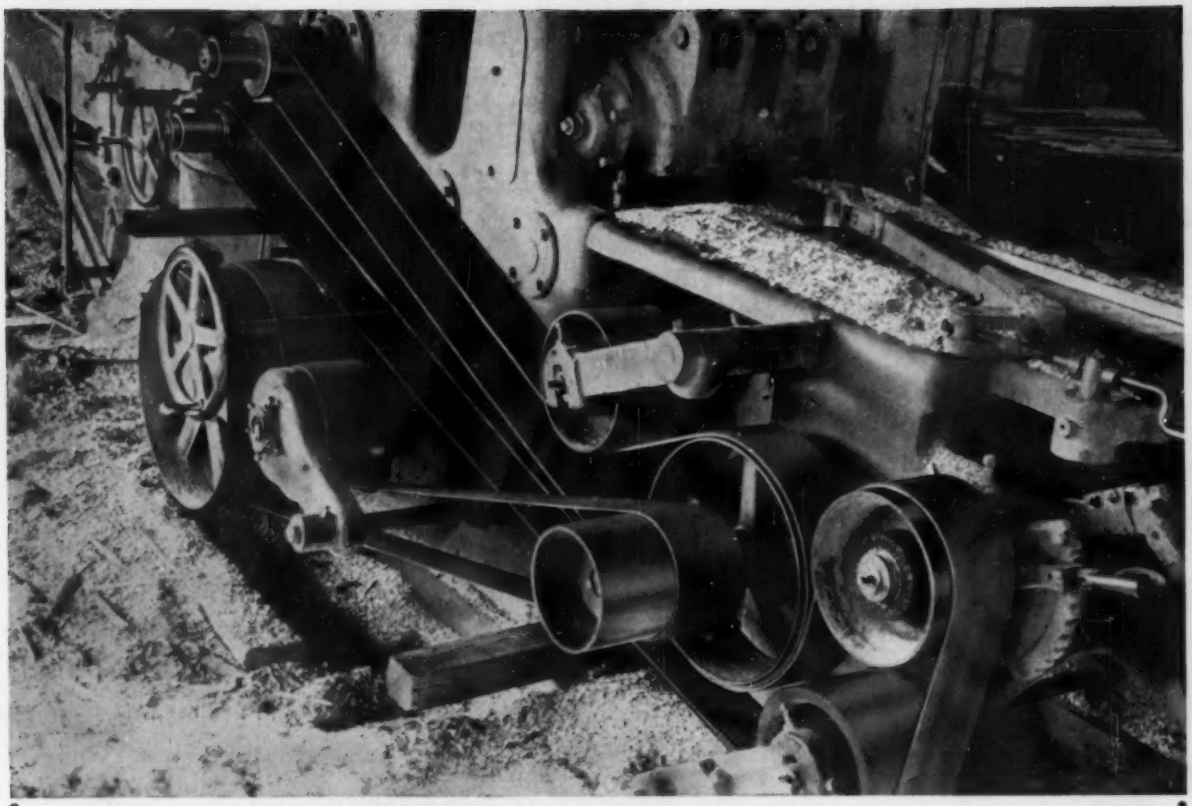


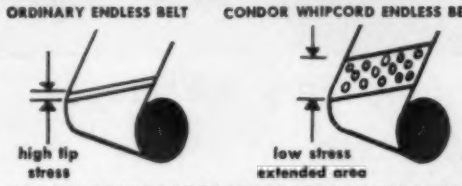
A 30-opening counterbalanced hot press?

There are few 30-opening presses and we know of only two (both designed and built by us) with a simultaneous-closing feature. For laminates or board products from bagasse, flakes, chips or fibers—the advantages of the counterbalance feature are the same: faster closing (more than three times faster), no "blow" and always uniform pressures on all platens. Counterbalanced multi-platen hot presses up to thirty openings can make a big difference in your plans. Our experience can give you higher production with greater product uniformity. Write or call WASHINGTON IRON WORKS, 1500 SIXTH AVENUE SOUTH, SEATTLE 4, WASHINGTON.



WASHINGTON PRESS EQUIPMENT HAS A PLACE IN YOUR PLANS





"MORE USE PER DOLLAR"

Exclusive Extensible-Tip Cover Splice extends stress over wide area with special rubber rivets . . . prevents cover separation under tension . . . prolongs endless belt life.

CONDOR ENDLESS BELTS OUTLAST 3 TO 10 ORDINARY BELTS

All-purpose Condor Whipcord Endless Belts provide steady, unfailing power delivery with high overload capacity—outlast as many as 10 ordinary belts on the toughest drives. Condor Belts feature an endless-wound, sealed-in cord construction which is destretched during manufacture. They can't shrink on the drive, are virtually unaffected by atmospheric changes. Manhattan's exclusive Extensible-Tip cover splice assures positive protection against cover separation—even at highest tensions.

Highly flexible, Condor Endless Belts offer exceptional advantages where serpentine drives supply power for several operations. Write for Bulletin 6869.

CONDOR COMPENSATED BELT

On closed drives where fasteners are required, Condor Compensated Belt holds fasteners up to 4 times longer than other belts. An exclusive process *equalizes* belt ply stresses rounding pulleys . . . eliminates ply rupture and separation—*especially at the fasteners!* Write for Bulletin 6808.

RM1040

LET AN R/M REPRESENTATIVE HELP YOU SELECT THE CONDOR BELT ENGINEERED TO GIVE "MORE USE PER DOLLAR".

RAYBESTOS-MANHATTAN, INC.

MANHATTAN RUBBER DIVISION, PASSAIC, NEW JERSEY

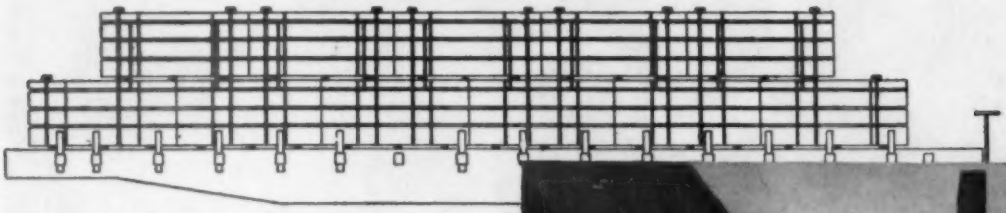
CONDOR WHIPCORD ENDLESS BELTS

- **For High Speeds, Heavy Loads, Short Centers... at High Tensions**
- **Length Unaffected by Atmospheric Changes**
- **Ideal for Serpentine Drives... Small Pulleys, Reverse Bends, Short Centers**
- **Selection of Driving Surfaces to Meet Tension Requirements**

R/M

ENGINEERED RUBBER PRODUCTS ... MORE USE PER DOLLAR

A message from Signode for lumber mills...and receivers



Drawing based on Section 5, Figure 6, AAR open top car loading rules, 1960

Strap... wrap... ship clean and dry

Let Signode help you make the most of the many advantages of this AAR approved lumber load for flat cars

At the mill: The availability of flat cars is much better than that of wide-door box cars.

At the mill: Loading is fast and easy. No special lift equipment needed.

At the mill: Stub stake load permits use of protective wrapping, and practically eliminates tearing of wrap.

As received: Strapped and wrapped lumber is clean and dry.

As received: Unloading can begin at once—is simple and fast. Receiver can use his mechanical handling equipment to greatest advantage... reduce unloading and storage cost.

As received: Wrapped lumber packages are weather protected for year-around outdoor storage...are easy and fast to tally...can often be forwarded to consumer unaltered. Undetected pilferage is eliminated.

Meanwhile, back at the mill . . . Your Signode man can be helping you in big and little ways, saving you money with the latest developments in centralized strapping and in time-saving ways to strap, handle, store and load lumber, and veneer and plywood too. Let us put him in touch with you now. In the meantime, write for free copies of one or more of these informative Forest Products Bulletins:

Flooring • Flush Doors • Logging • Millwork • Particleboard
Lumber Yard Handling Methods • Plywood • Sawmill Applications • Studs
Tree Seedlings • Veneer • Handling Methods for Packaged Lumber

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First in steel strapping

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Portland, 1519 N. W. Irving St. • Seattle 4, 1750 Occidental Ave. • Spokane, 617 Paulsen Bldg.
Canadian Steel Strapping Co., Ltd., Vancouver, B. C.

Western Hardwood Industry Production Climbing

Production is now running close to 60 million board feet a year, Paul A. Barber, Oregon Alder-Maple Co., Willamina, Ore., and president of the Northwest Hardwood Association, reported at the group's spring meeting in Eugene, Ore.

Membership in the vertical lumber association is also growing . . . nine new members were added . . . inventories show resources to be greater than a few years ago, and new products are continuously being developed.

Dr. Eric L. Ellwood, technologist at the University of California Forest Products Laboratory and recently appointed technical consultant for the association, says commercially usable hardwood resources in California are estimated at six billion feet. This includes tanoak, California black oak, Pacific madrone, canyon live oak, alder, chinkapin, Oregon and California white oak, aspen, maple, and laurel. Tanoak, California black oak and Pacific madrone comprise about 85% of the total sawlog volume.

James L. Overholser, technical editor at the Oregon Forests Products Research Center in Corvallis, Ore., reviewed hardwood resources in five Oregon counties: Lane, Polk, Linn, Benton and Marion. He says more large tract owners are logging off valuable hardwoods to supply a growing market.

Mr. Overholser says volume of hardwoods in only four counties checked in 1948 and 1953 rose from 145 million to 187 million feet.

Oregon hardwoods are being put to a number of uses, according to Mr. Overholser. These include Pacific dogwood for shuttle blocks in the textile industry, black willow for artificial limbs, core stock, turned articles and small woodenware; Oregon ash for oars and paddles; Oregon white oak for saddle stock; ash for parquetry flooring; madrone as a substitute for black cherry in the production of furniture; alder and maple for a wide variety of furniture items; and various species for veneer.

The association is seeking to obtain a permanent resident inspector for the Pacific Northwest. The association says a revised study on "Management of Red Alder in the Pacific Northwest" has been completed and that free copies are available.

•

Montana Plant Operating

C & C Development Co. has started production at its plant near Kalispell. Initial production used veneer shipped in from the coast. A lathe is being installed.

THIS "BACKSCRATCHER" CAN BE OPERATED WITH TELEVISION TOO!

When EDERER engineers developed this giant "backscratcher" to move piles of hog fuel, they put the operator in a fully enclosed cab which moves with the rake itself. Later, at the request of a mill operator, another of these cranes was "job-engineered" to operate from remote controls in another room with closed circuit television providing "eyes" for operating the crane.

The rake on this crane operates hydraulically from the trolley. The rake can push or pull; reaches from the floor to 20 feet in the air; has a 17-foot horizontal reach with a seven-foot stroke. The rake will rotate 280 degrees. Operation may be from the cab—or as described here—by television-guided remote control.

EDERER "job-engineering" has provided specialized equipment for countless such unusual requirements in the plywood and wood products industries. Let's talk with you about your job requirements.

EDERER Cranes

EDERER "job-engineering" helps expand production in an expanding industry.

358C59

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2933 FIRST AVENUE SOUTH • SEATTLE 4, WASHINGTON
EXPORT DIVISION: 301 Clay Street, San Francisco 11, California

Since 1901 "JOB-ENGINEERING" CRANES AND HEAVY EQUIPMENT

Dispenses all lubricating oils up to 25,000 SSUV at 100° F.

new

ALEMITE OIL-MIST SYSTEM WITH *thermo-Aire*

Now! Automatic Lubrication for:

Heavy-duty bull gears!

Heavily loaded plain bearings!

Heavy-duty chains!

Heavy-duty slides and ways!

Largest size anti-friction bearings!

Now even your heavy-duty bearing surfaces can be lubricated continuously and automatically with the required high viscosity oils! An exclusive new "Thermo-Aire" feature on Alemite's Oil-Mist System preheats incoming air. This preheated air permits the atomization of the heaviest straight mineral oils.

The "Thermo-Aire" unit brings all the advantages of Alemite Oil-Mist to heavy-duty lubrication. You get automatic, continuous lubrication ... eliminate guesswork, cut oil consumption (up to 90%). You prevent product damage caused by oil drippings, extend bearing life, eliminate waste, save manhours, get greater safety, eliminate machine downtime and reduce the number of lubricants needed.

Write for a Free Catalog, or see your Alemite Representative

Symbol of SW Excellence

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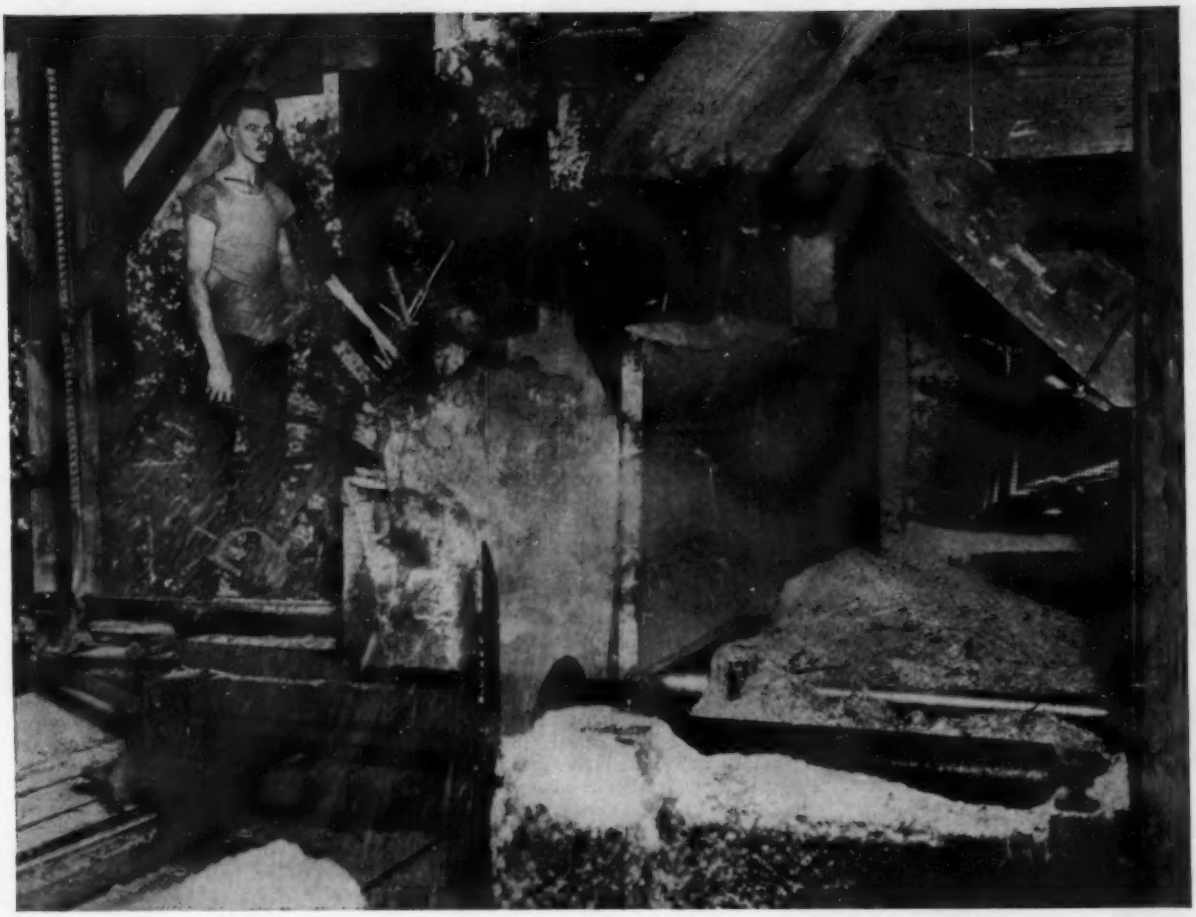

How you can saw more board feet . . . and cut unscheduled downtime

Just do what so many heads-up mill operators have done. Set up a Texaco Simplified Lube Plan for your mill that will give you these positive benefits:

1. You'll be able to lubricate every major piece of equipment in your mill with only *six lube products or less* regardless of the number you're using now;

2. You'll reduce the danger of misapplying lubricants and the costly equipment failures it can cause;

3. You'll save on inventory, storage, handling and paperwork.

With the proper lubrication for each machine, your equipment will last longer and run more dependably — with less unscheduled downtime. And there'll be less frequent overhauls and replacements to chew into profits.

So start earning the benefits of a Texaco Simplified Lube Plan right away. Just call the nearest of the more than 2,300 Texaco Distributing Plants, or write:

Texaco Inc., 135 East 42nd Street, New York 17, N.Y.

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TEXACO

Throughout the United States
Canada • Latin America • West Africa

LUBRICATION IS A MAJOR FACTOR IN COST CONTROL
(PARTS, INVENTORY, PRODUCTION, DOWNTIME, MAINTENANCE)

Three Men Produce 40M per Shift in automated, "packaged" sawmill of Mayo Lumber Co., Ltd., Nanaimo, Vancouver Island, B. C.

Mill floor producers are the headsawyer, edgerman and trimmerman. Two men outside the mill, the barker operator and log-stacker operator, up total to five production employees between log pond and green chain.

Each man is considered a key employee. Mill floor men are tied in closely with the front office through an in-plant intercom system. Each of the key men is given copies of all orders so he can obtain the greatest quality and quantity from each log or piece of lumber, in conformance with the orders being filled.

Completely integrated operations are planned, and when complete will include dry kilns, planing mill and a Kreibaum process particle board plant in addition to the present sawmill, barking and chipping plants. Utilization of every log will be complete, and each portion of the log will go to its highest economic use.

The company hogs bark and any slabs with residual bark on them. Both chips and hogged fuel are sold. The plant has a steady market for its refuse. When the particle board plant is erected, later, a large portion of the chippable material will be retained and utilized, thus increasing the dollar share above the straight pulp chip arrangement.

Open market logs from the B. C. Coast supply 50% of Mayo's log supply. The remainder is logged on E&N lands (on the grant of the Esquimalt & Nanaimo Railroad). This is government-owned timber lying on the east side of Vancouver Island.

Wood in this timber is considered relatively high in density, thus making it well suited for use in structural applications. The logs run reasonably high in quality and yield a better than average recovery for grade. Log volume averages 700 to 900 board feet in lengths up to 40 feet.

"Turn-key" installation. The sawmill and other units to follow were engineered and equipped by Mater Engineering and Mater Machine Works, Corvallis, Ore. They are housed in a Butler building.

Consulting engineer Milton Mater developed the Mayo plan from detailed studies of the expected economic return from the medium size logs in the district. There was no need for a burner as there is a local market for hog fuel; thus even the barker refuse becomes a plus factor.

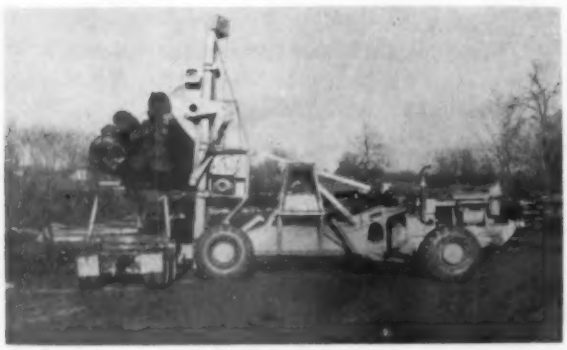
Other important considerations were: a complete plant with multiple lumber products; automation, in line

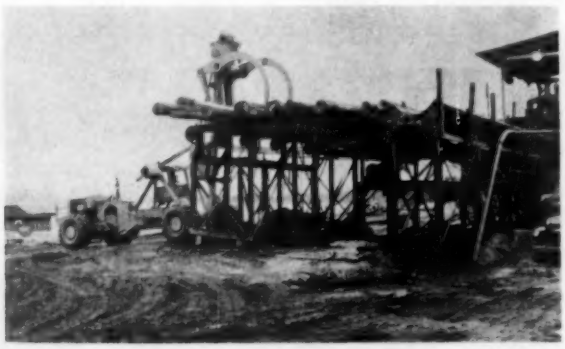
Electric wheel stacker handles all yard chores

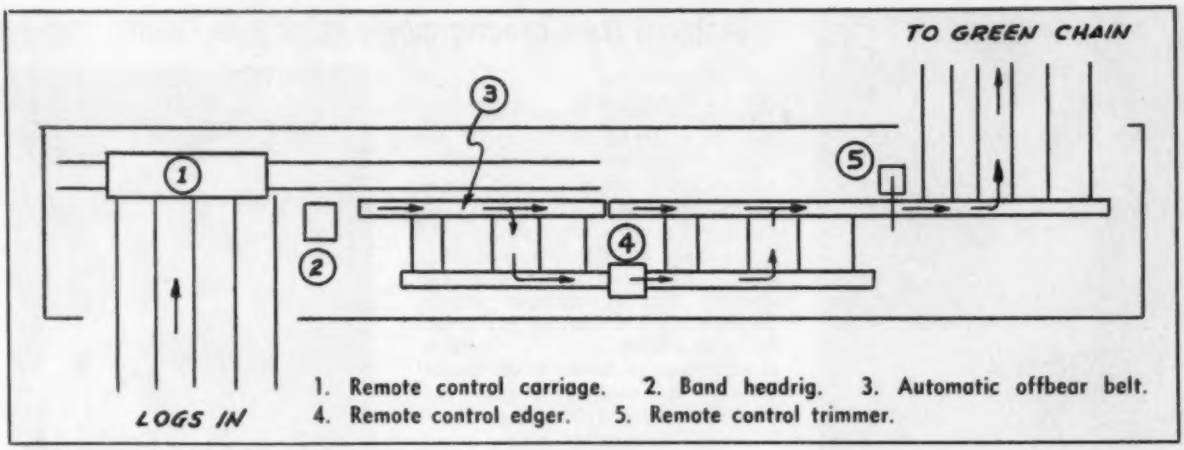
At left. Specially adapted set of water seals on electric wheel of LeTourneau log stacker permits it to wade into salt water at pond. It can operate in 4½ feet of water. Logs can be moved from the pond directly to the mill, or into storage.

Left, below. LeTourneau unloads truck load in a single bite. It is the only machine working in the yard, unloading trucks, removing logs from the pond and sorting and decking and feeding the sawmill.

Right, below. Logs from yard or pond are placed on elevated chains ahead of barker. At other end of barker structure is another set of chains for storage of barked logs. This permits removal of a limited supply of barked logs which can be fed into the mill in case the barker is temporarily closed down.






TO GREEN CHAIN
LOGS IN
1. Remote control carriage. 2. Band headrig. 3. Automatic offbear belt.
4. Remote control edger. 5. Remote control trimmer.

with available investment capital; efficient flow throughout, from log pond to car or ship.

Copies of orders go to each man in sawmill. This helps them to cut the best grades in line with present needs. Orders are shipped rough green, mainly timbers or large dimension for export or local use. Timber sizes are 6x12 and wider, predominately for United Kingdom markets, plus dimension 1½, 2 and 3-inch for South Africa. Management feels that if the operators have complete sales information, they can do a better job in grade recovery.

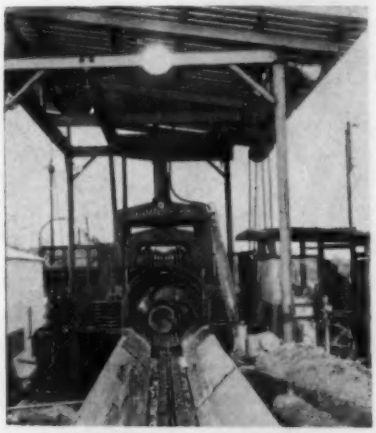
The mill cuts special sizes on order. As a small mill, it is simpler to specialize in cutting the special sizes. The mill cuts Douglas fir, hemlock and some white pine. The mill takes logs up to 60 inches in diameter. The average runs from 18 to 26 inches.

Intercom system links up the following stations: sawyer, edger, trimmer, PLIB man, barker and mill offices. An innovation will be the piping of music into the system.

Later, an electric kiln of Backrich design will be installed by Galbraith & Sulley, Vancouver, B. C. It will be a high-temperature kiln carrying a charge of 10,000 feet. The site has room for three kilns. Loading of dried, finished lumber will be directly into cars.

Barker and deck operation closely integrated

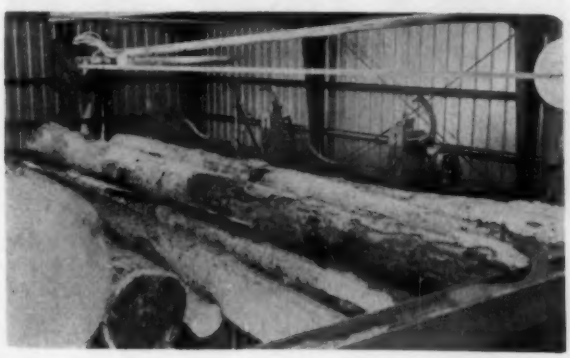
At right. Incoming logs are barked in Canadian Sumner 48-inch mechanical ring barker. Operator is in control station at right of picture. He also operates the L-M electric-powered cut-off chain saw.



Left, below. Close-up of limit switches on the log deck ahead of the carriage. As log advancing from left rolls off end of chain (1) it is held in place by deck stop; log hits steel tripping lever (2) when log rolls onto carriage. Limit switch and lever returns to "on" position and remainder of logs on chains are advanced until first log moves into same position as log shown here.

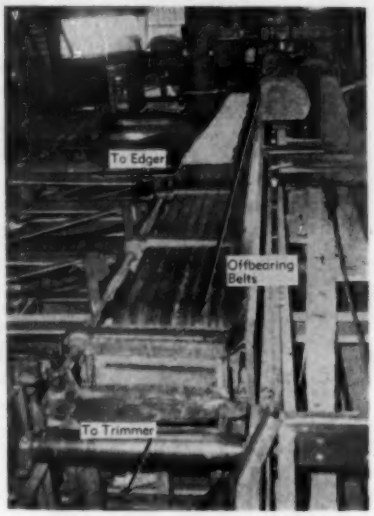
Right, below. Log deck ahead of the carriage. Carriage is 36 feet long and has 60-inch opening head blocks. It is equipped with two mechanisms which can taper any desired amount. Carriage has rotary limit switches to prevent dogs from running into the saw.

(Continued on next page)



Material from headrig moves quickly on chains, conveyor

Headrig is Mater 7-foot band powered by a 200-hp electric motor and rubber V-belt drive. It has automatic-type airbrake which will stop saw in 17 seconds. This braking action takes place on the lower arbor shaft. It has a rim speed of 7880-fpm. The single cutting band is 13 inches wide. The sawyer's cage is equipped with a Selsun dial. The carriage is powered by an amplidyne drive. A 100-hp ac electric motor drives a dc motor. This is a GE unit with Forano carriage cable drive. The carriage has an automatic lubricating system which places four drops of oil on 32 points of wear when the carriage backs up. A tight fitting will pump up to 1000 pounds pressure through 1/8-inch nylon tubing.



Pre-set saws speed operation at edger . . .

At left. Edgerman selects saw location on round dial first, then presses pre-set button and saws move to desired location. While piece is being cut, he makes pre-set for next piece. Horizontal scale gives exact saw location at glance. Note loudspeaker and intercom set at lower right part of console.

At right. Elevated position of edger operator is safer. He also has an excellent view of material moving into edger and has the advantage of a double shadowline (arrow) for greater recovery.

Far right. A feature of the edger is the cut-off saw in the center of feed roll section ahead of edger. Shown here in cant from headrig being sawn in two.

Spot lights-photoelectric cell system assures accurate trimming . . . single circular

Lumber length of pieces to be trimmed is automatically transmitted to the trimmerman's control panel. Upon noting length signal, trimmerman activates a movable stop which slids down the rollcase to its correct position while he trims the front end. Lengths up to 40 feet can

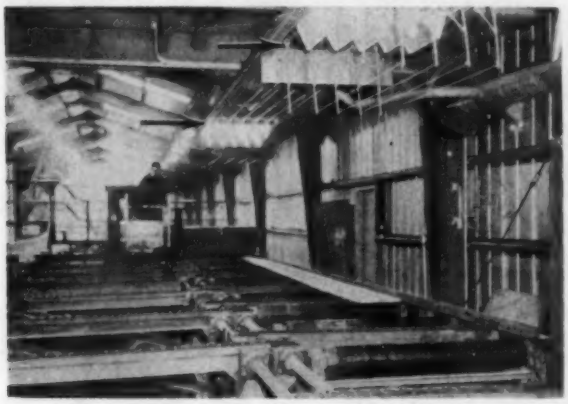
be trimmed accurately in increments of six inches. The length determination is made by a battery of spot lights on the wall (photo at right) and photoelectric cells hidden behind openings in steel framework ahead of the trim saw.

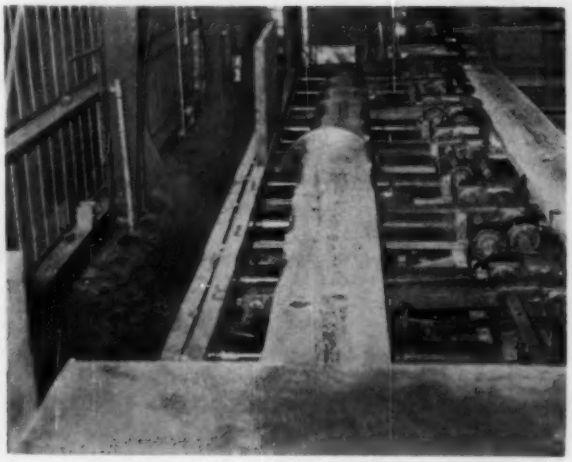
to edger, trimmer or refuse conveyor

Automatic headrig offbear. Goodyear belts and carriage and chains to the edges are pictured here. Slabs coming off headsaw are moved by offbearing belts. This series of belts is integrally attached to the steel frame which stretches the entire length of the belts. The assembly is lowered slightly on the end, in the foreground, to permit slabs to drop out into the main sawmill refuse conveyor. Lumber to the edger is moved off by transfer chain activated by a stop. Timbers or other material which will not be edged moves straight ahead to the trimmer. The sawyer tells the trimmerman a timber is coming by pressing a button which flashes a light. The slab offbearing belt lowers following a delay of seven to eight seconds after the slab enters the belt. The belts travel at the same speed as the forward moving carriage; speed doubles when the carriage is returning to the starting position. The offbearing belt assembly is lowered by 28-inch air cylinders.

Slab (1) on belt is about to drop out below onto main refuse conveyor. Note how offbearing assembly is lowered (2) to permit slabs to drop out. Lumber going to edger is moved onto transfer chains when offbearing belts are in horizontal position. Offbear belt has dc drive, powered by Reliance Electric & Engineering Co. adjustable speed control unit.

elevated station improves visibility

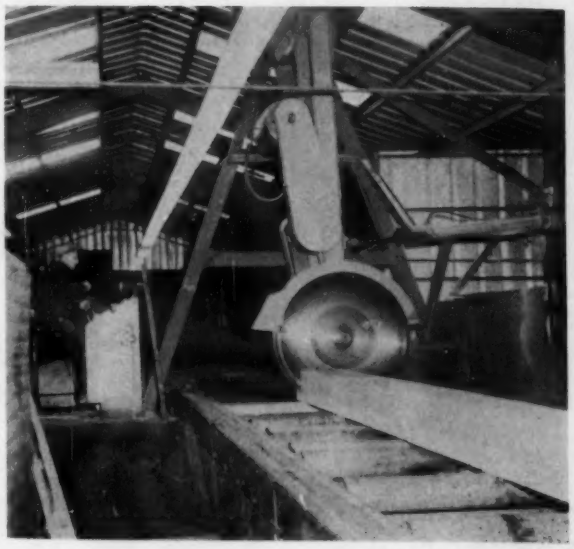




saw handles trimming

54-inch circular trim saw takes the place of the conventional multi-saw trimmer. Due to the high proportion of large timbers, a single saw serves the purpose adequately and does not slow production. The trim saw is electric-motor-driven and is moved into position by an air cylinder.

An air motor drives the roll case. It is variable speed, which is attained with a pilot valve modulating type, controlled by the operator's lever. Lumber flippers are located beyond the trimmer to kick the ends into the refuse conveyor for chips. The mill is considered to be self-cleaning.



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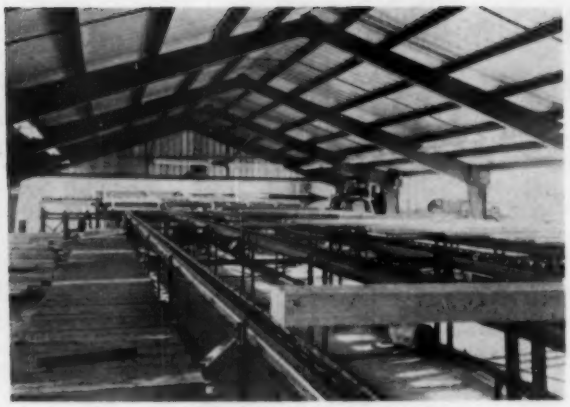
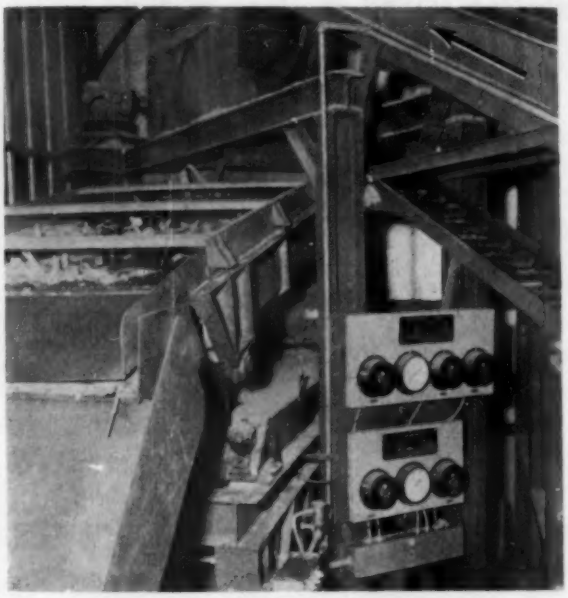


Individually marked lumber simplifies sorting and stacking

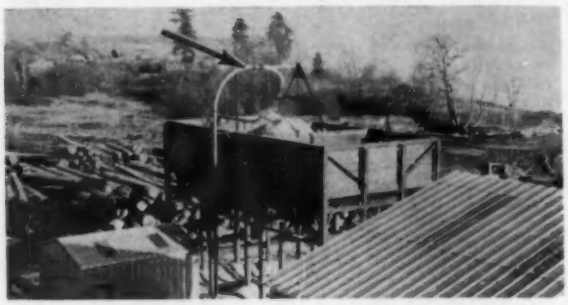
Railroad tracks divide the plant site. Lumber from sawmill is conveyed up over the tracks on chains on the steel structure and onto the green chain. The green chain is equipped with roll top chain to facilitate easy pull-off and stacking of material. Grading and stamping area is indicated by arrow. Each piece is stamped with the trademark and order number so that it will be pulled off onto a pile for a separate order. No further sorting or stacking is required. When the new planer building is completed further handling will be necessary.

Chip handling is automatic operation

Chipper House. This view shows the control panel in the screen room for the Conveyair pneumatic chip and fines conveyor. The chains indicated by arrow act as both a conveyor and surge dampener to feed chips from a bottom discharge Sumner chipper in the near-by chipper house to the screen. Fines from screen drop into a Conveyair pneumatic fines conveyor, pick up sawdust at a feed point 120 feet further on, and travel to fuel bin 500 feet away. Chips drop into a Chip-veyor which carries them to the loading station. The complete chipper system is interlocked. If anything breaks down on the conveyors leading to or from the chipper and an electrical overload results, a cascade system of interlocks will stop any one motor and everything behind it. Chipper has test lights to show all the circuits in the chip plant and which one is out.



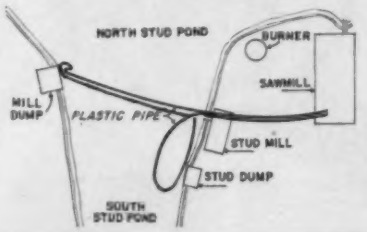
Oversized materials entering chipper house hits swinging gates which in turn activates Square D limit switch (arrow) stopping conveyor. Utility man at chipper is notified to remove oversize material. It is split to chipping size.



Chip loading area has three separate bins under which trucks can back to be loaded. Conveyair pneumatic chip conveyor has a flexible joint (arrow) which will automatically direct chips into one of three bins. ■■

Job Saver Ideas

Ice-free channels are kept at pond by blowing compressed air through perforated plastic pipe.



Water stays at about freezing, or lower, during the winter in the log pond of San Poil Lumber Co., Republic, Wash. As a result, it was difficult to keep open channels for moving logs from the dumps to the mill. Compressed air blown through perforated plastic pipe submerged in the ponds has solved the problem.

Initial line to mill dump (see illustration above) consisted of 600 feet of ½-inch plastic pipe. The line from the compressor in the sawmill is 300 feet, the remaining 300 feet is in the pond. Perforations in this section are 1/16 inch and occur every eight feet. To submerge the hose, weights were attached every 12 to 16 feet.

The pipe was put in at 4:30 p.m. The following morning an open channel about six feet across existed, except for three or four ice bridges. These were caused by the plastic pipe riding on the surface on tops of stud logs. This was quickly remedied.

The company decided on an addition to the system, to its stud dump. Again, 300 feet of plastic pipe, this time ¾-inch, was run from the compressor in the sawmill to the stud pond. A Tee joint was installed and 350 feet of line extended across the pond to form a loop at the ramp to create a holding pond. From the other side of the Tee a pipe was extended around the small pond. No holes were made in either of these lines for the first 150 feet. For the rest of their lengths, they have 1/16-inch holes every eight feet.

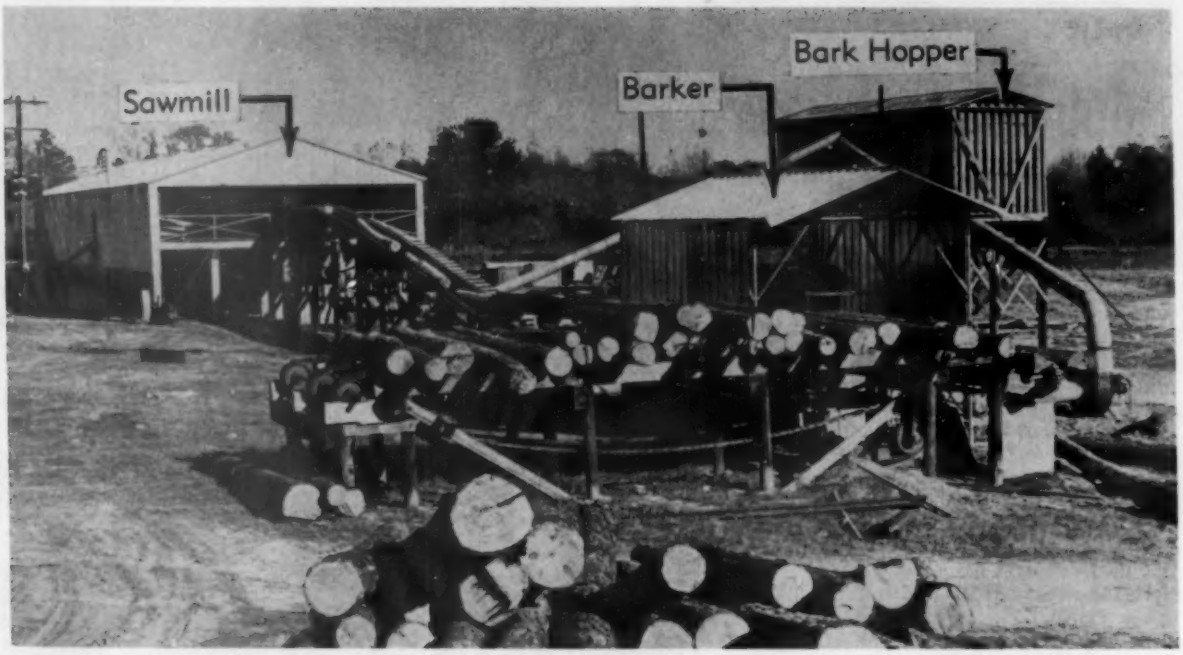
The air holes in the pipe are too large, San Poil officials feel. On future installation, 1/48 or 1/64 inch holes will be tried. The eight-foot spacing of holes in the smaller stud pond are about right. In the deeper pond, spacings of 10 to 12 feet would be adequate.

When the ¾-inch pipe was installed, a pressure reducing valve and a regular ¾-inch valve were applied. Pressure at the compressor was reduced from 140 pounds to 60 pounds and the ¾-inch valve was left open. After several days, pressure was reduced further to 30 pounds and the system still operated effectively. If holes had been smaller, pressure could have been reduced further. The air compressor used is a Gardner-Denver.

Cleared pond at the unloading ramp is shown here. The cleared channel extends from the pond to the log haul into the sawmill.

Thin sheet of ice formed in the center of the loop over night was easily removed with pole. This is the stud pond area; channel to ramp is at left.

Bubble pattern from air shown here. Patterns in foreground is from 1/32-inch hole; those in the background from 1/16-inch holes.



General view of mill which is housed in 36x120-foot Butler building. Logs are loaded onto log deck, foreground, by Pettibone Mullikin Cary-Lift, and feed through 26-inch automatic Cambio barker. One man handles movement of logs from deck to gang saw. Swedish type log haul has adjustable drive sprocket to reduce chain wear.

Small Mill Uses Entire Log for salable products: lumber, sawdust, bark and chips. Single waste conveyor moves all plant residue.

The H. C. Jackson Lumber Co. sawmill at Washington, Ga., incorporates many unique features. It was installed as a complete turn-key job.

"We decided on a gang saw," says C. N. Jackson, Jr., "because we have seen too much miscut lumber from portable mills. With today's timber and labor costs, we can't afford to throw away or burn anything. In this mill we sell the entire log—lumber, chips, bark and sawdust."

Soderhamn Machine supplied the complete installation, including machines, engineering, installation and start-up service. John Grip, specialist from the parent Swedish company, trained Jackson's operators and ran the mill for 60 days.

Production is over 35,000 bd. ft. per day with an average log diameter of 10 inches, and an average length of 12 feet. The entire operation requires 12 men: Carry-Lift operator, man for log deck, barker, log separation and haul-up, gang sawyer, two edgermen, trimmerman, lumber grader, lumber sorter, two stackers, filer and one man overseeing the chipper and cleaning up around the mill.

A single waste conveyor is used. All trimmings, slabs and edgings are carried in one direction to the chipper, and all sawdust and bark go another direction to the truck-loading hopper. Chips are blown direct to rail car on nearby siding by a Phelps loader. Sawdust and bark mixture is contracted for sale through a local veterinarian to poultry farms for chickenhouse litter. There is no refuse burner nor scrap pile.

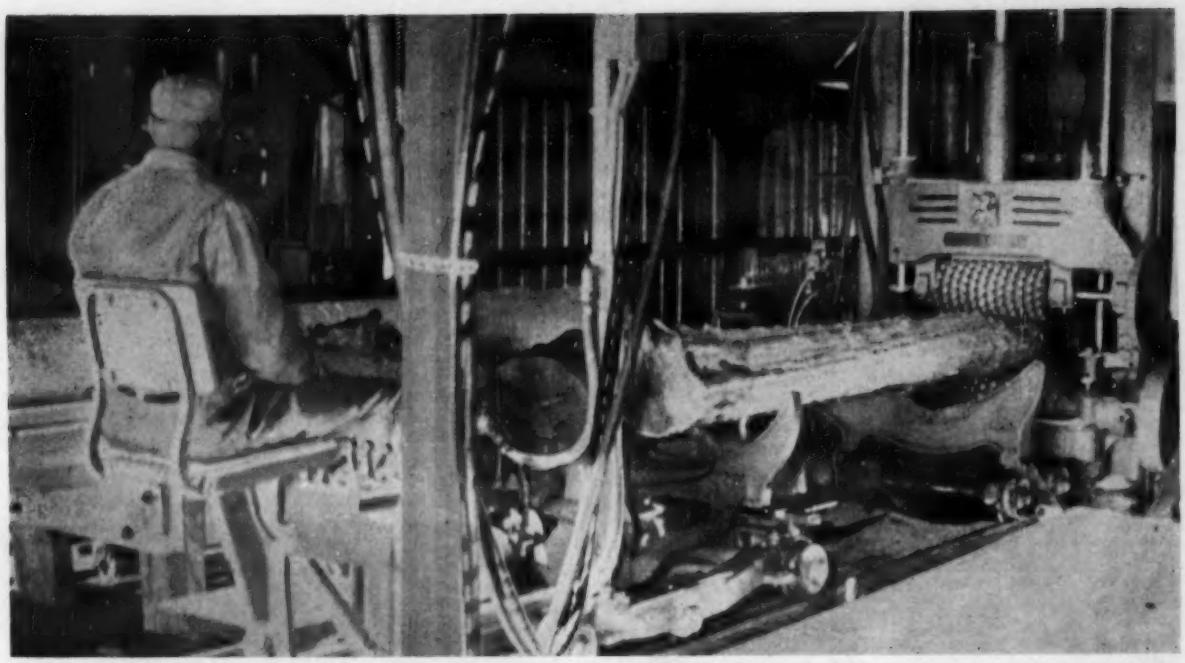
Conveyors and transfer chains, along with the Cambio Barker, were designed into the mill to eliminate as much manpower as possible, and to reduce maintenance and wear to a minimum.

The plant is proving highly efficient and is an outstanding example of how a small mill can operate at a profit through semi-automation and full utilization of the log.

The Jackson Operation. H. C. Jackson Lumber Co., Washington, Ga., was started in 1920 and operated as a planing mill, servicing 25 sawmills. At height of production during World War II, it shipped 32 million feet annually.

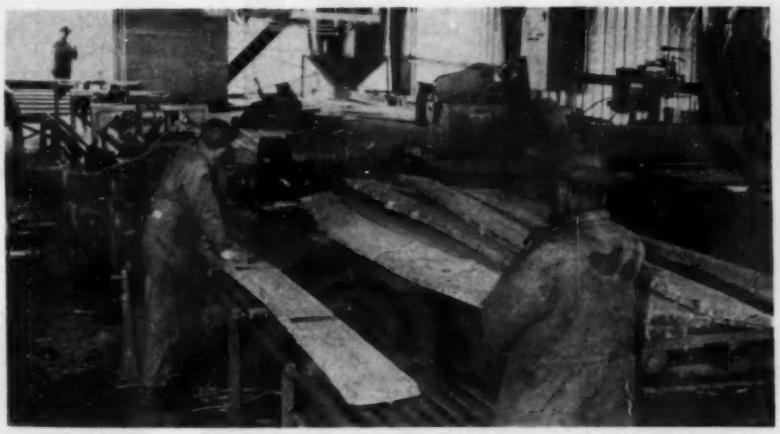
In 1929, the founder's son and grandson, C. N. Jackson, Sr. and Jr., set up a complete sawmill, buying standing timber and contract cutting and bought haul-in logs. When they wanted a new mill they turned the problem over to a single engineering and manufacturing firm. Soderhamn Machine Mfg. Co., was called on to lay out a complete packaged mill based on a round log gang saw installed, with provisions for future expansion to a tandem gang or combination band mill.

The low manpower and highly efficient utilization are making this small mill pay off for the Jacksons.

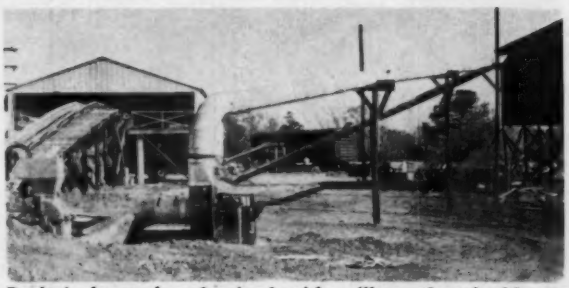


Logs are stopped automatically and kicked directly to pneumatic infeed carriage which feeds Soderhamn gang saw. Log haul resumes automatically and feeds next log into ready position. Operator can rotate log 360 degrees and swing log ends to gang center without help. Dixie 26-inch model makes 24-inch stroke at 325 rpm.

Transfer chain behind gang saw feeds to Soderhamn 3-saw edger operating at 325 lineal feet per minute. It is equipped with shadowline and automatic tailing device. In background above are Hanchett grinding and filing room equipment, Newman knife grinder and cyclone, all furnished as part of the complete turn-key job.



Single waste conveyor serves the entire sawmill. It feeds directly to the Soderhamn 48-inch double-duty horizontal clipper.



Bark is hogged and mixed with mill sawdust in blower system and then blown to hopper. Chip blower duct and rail car are shown in the background. ■■

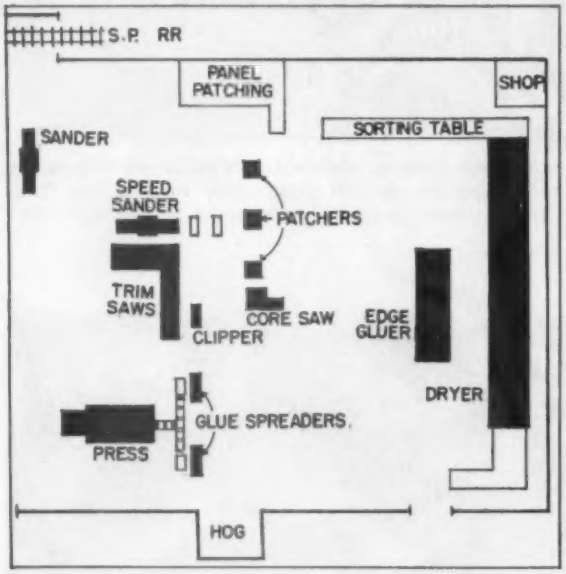
Medium Sized Operation

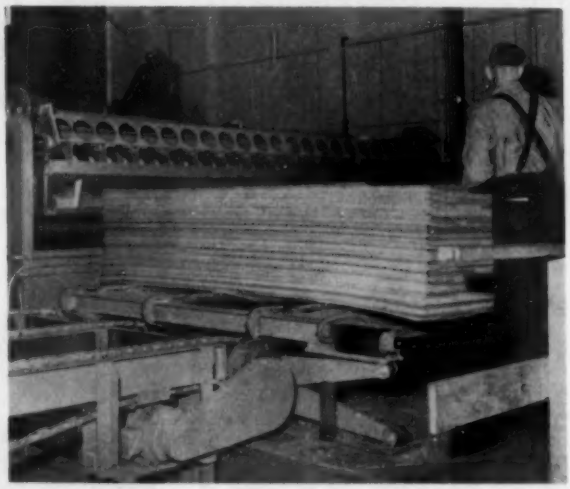
At official opening, W. E. Difford, executive vice-president of the Douglas Fir Plywood Association, left, welcomed the Hults, Julius, center, and Nils, into membership in the plywood association.

Completion of the new plant at Hult Lumber Co., Junction City, Ore., culminates 54 years in the milling business for Julius Hult, founder of the organization in 1906, and board chairman.

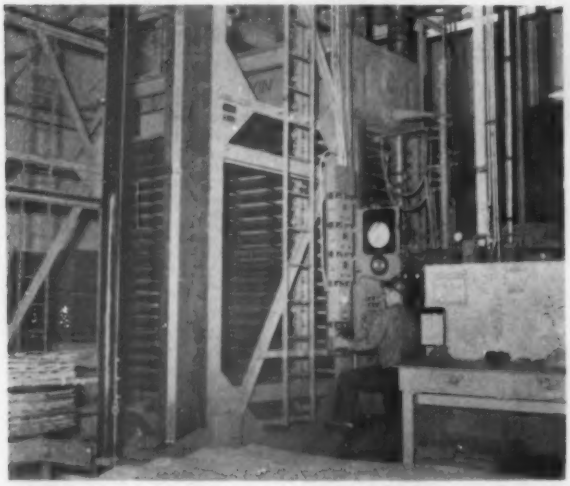
The original mill is long gone, and in its place there is operating at Horton a band mill cutting 100,000 board feet daily. Updating of the operations has been a constant philosophy of both Julius Hult and his son Nil, the latter now active operational head.

The company's remanufacturing plant at Junction City, was constructed in 1947, together with kilns to care for the entire mill output. Followed the addition of a veneer plant at the Horton mill in 1956 and a barker and chipper system in 1958. Today the company

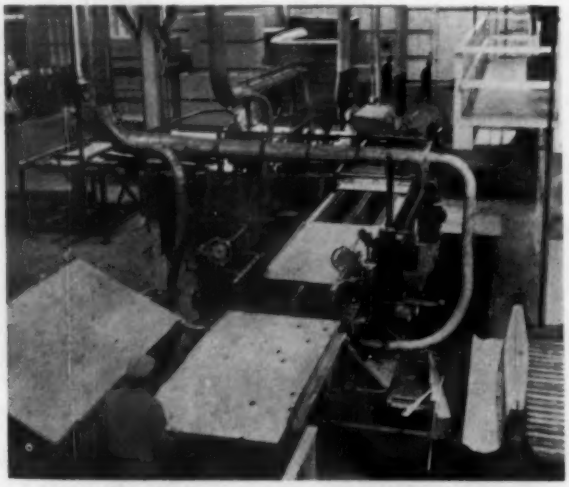




1 The 18-section, 6-line Coe dryer is fed by a Sweed automatic feeder. Transfer chains, left, are fed by lift. Dryer is the start of production line.



3 Hot press is 20-opening unit fed by American loader. Press may be enlarged to 30 openings. Spreaders feed to press on a T-line roll transfer system to two spreaders.



4 Sizing line is close to the hot press. Jenkins skinner and cut-off saw are served by one man. Veneer is hauled from tilt lift, is automatically restacked.

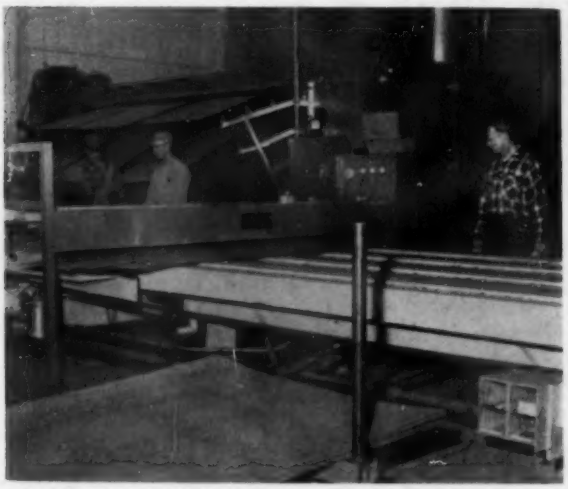
HULT LUMBER CO. *(Continued)*

Adds Lay-up Plant to Round Out Utilization

makes finished dried lumber, chips, veneer and pylwood.

Log utilization is now well rounded. The company has long been known for their quality products and the plywood produced in the new mill is DFPA inspected and grade-trademarked. The Hults, many years ago, set up a tree farm management program for their more than 20,000 acres of timberland in the Oregon Coast Range.

The plywood plant produces four million sq. ft. monthly, both exterior and interior DFPA grades, principally Douglas fir. The layout is built around a basic center core which houses the plant offices and lunch room. This core is surrounded by the sizing saws, Speedsander, patchers, core saw and dry clipper. The dryer, edger, re-patch line, sander and hot press are in the periphery around the center core.



2 Veneer from dryer offbears onto grader's belt, moves through Mann-Russell moisture meter to dry sorting table. Veneer is sorted onto carts for lift truck handling.

Room for expansion has been provided, with space for a second dryer line beside the present 6-line, 18-section Coe dryer. The Baldwin 20-opening hot press, directly below the glue mixing room, may be increased to 30 openings to up production by 50%. Other equipment is spotted to allow for increase of production by adding new equipment or handling systems which may be devised in the future. This was one of the basic concepts of Collinson Engineering Co. of Portland, Ore., which designed the plant.

The all-wood building is 200x400 ft., providing 78,400 sq. ft. of floor space. It houses a warehouse and two covered rail lines allowing for the inside loading of eight rail cars at once. Plant costs were over $1 million.

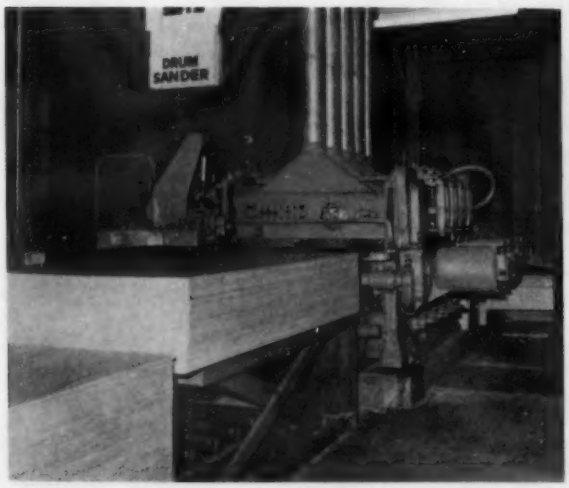
Presently, all refuse from the plant goes to a Peninsula hog to be converted into fuel for the boilers that serve the nearby dry kilns, as well as the plywood plant dryer.

Well lighted with ceiling fluorescent lights and drop lights over critical areas, all machines have high visibility. The light green walls make the surroundings pleasant and encourage good housekeeping. Lighting was enginered by the plant maintenance engineer.

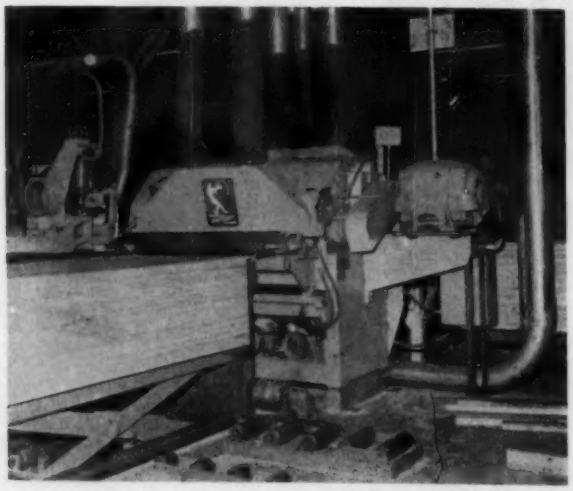
Principal Equipment

COE 18-section, 6-line dryer; SWEED dryer feeder; MANN-RUSSELL edge gluer; GLOBE jointer; BALDWIN 20-opening hot press; AMERICAN press loader; GLOBE spreaders; YATES-AMERICAN drum sander; TIMESAVER Speedsander; WESTERN MACHINERY repatch line; SKOOG veneer patchers; WHEELER core band saw; JENKINS sizing saws; GLOBE mixer; CAROUTHERS blower system; PENINSULA hog; MANN-RUSSELL moisture meter; HYSTER lift trucks; SIGNODE strapping.

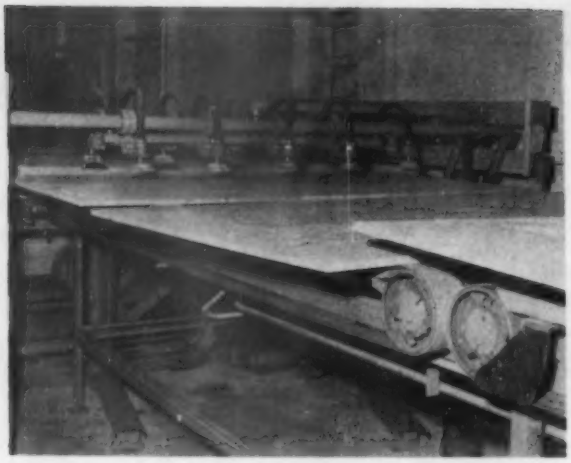
Details on repatch line appear on next page.



5 Grading is done behind this 8-drum Yates-American sander. Stock requiring repatching goes to repatch line. Finished panels move to the warehouse.



6 Repatched panels, when completed, go to this Speedbelt sander for patch sanding, then to warehouse or reject.

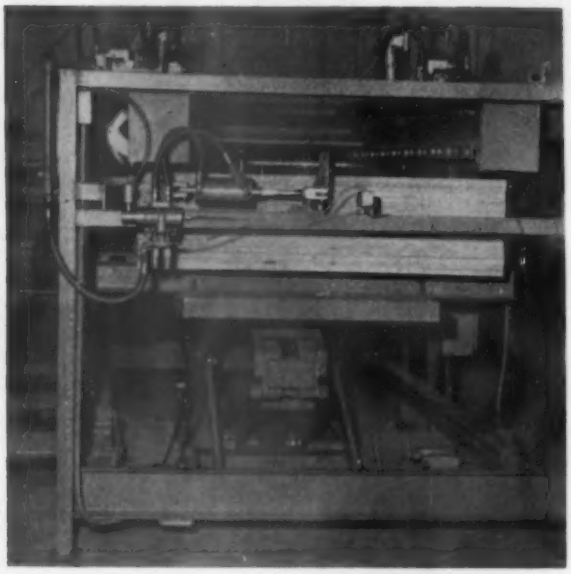


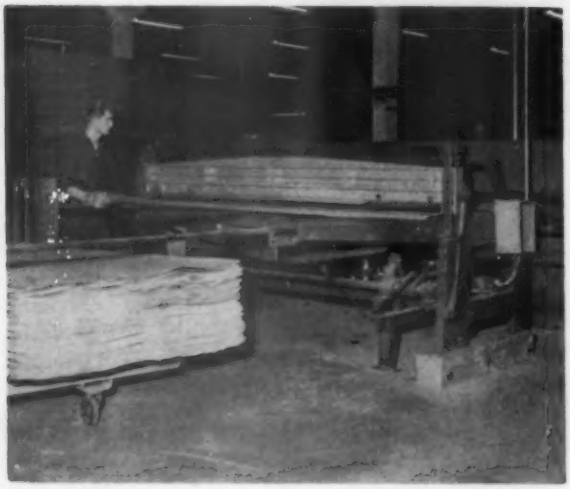
Efficient repatch line was prefabricated by Western Machinery Co. and installed ready to go.

Top, left. Panels are fed by lift, using suction cups. Use of cups precents scuffing or edge damage.

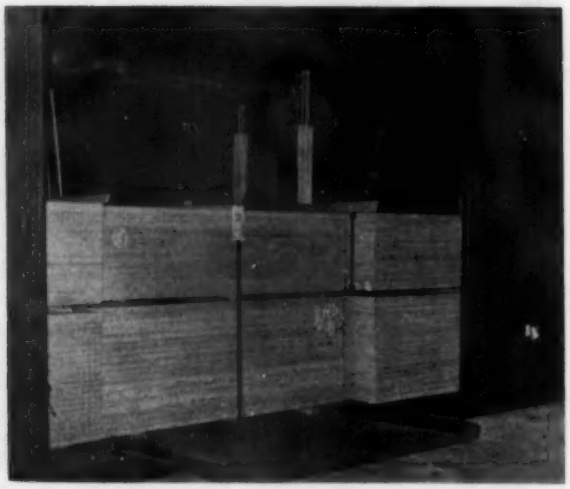
Top, right. First patcher in background routs and places shims. Panels go through squeeze rolls to second patcher in foreground where they are routed and patches set. The second patcher feeds completed panels to automatic stacker rolls. Both patchers have "jump" turntable for easy panel handling.

Left. Automatic stacking on lift. Panels are dropped flat, one at a time, from skate rolls as side arms pull out. Pusher shoes on ends and sides even up stacks. Completed stacks are automatically ejected on floor rolls for handling by lift truck.





Edge gluing of veneer for face and back stock is done with Globe jointer and a Mann-Russell electronic unit. It is a two-man operation.



Stacking and strapping of plywood is handled by four men. Signode strapping is used to unitize load before they are place in cars on indoors trackage. ■■

Plywood Components Coming in New Forms

Foamed-in cores for sandwich panels, and a new coating for roofs and walls are near.

DELTA FRAME, basically a series of plywood boxes, is demonstrated by Robert Waring, staff architect of the DFPA. It has application in nearly 200 types of buildings.

Developments in component fabrication and design, including a new concept in low-cost service buildings, were unveiled as members of Plywood Fabricator Service, Inc., evaluated the organization's first year of operation.

PFS was launched in April 1959, by the Douglas Fir Plywood Association to provide quality supervision and control, fabrication and design assistance, research and promotional help to the fast-growing building component industry.

This first annual meeting drew 33 representatives of PFS member fabricators to Tacoma, Wash., for two days of presentations dealing with new information developed through research by PFS and its parent organization.

Nearly-completed research in plywood geodesic domes was reviewed and a construction method called a "delta frame" was revealed by its designer, DFPA staff architect Robert Waring.

Other new material included joint treatments for stressed skin panel construction; results of research on sandwich panels; test data on a new, low-cost kingpost truss; applications for a "cathedral" box beam; recent work concerning folded plates; the development of permanent coatings for prefinishing components, and methods of caulking exposed roof joints.

Potential for the industry was reappraised by Stanley A. Taylor, DFPA field promotion director. He said a recent survey of 4571 architects, taken during personal calls by his 80-man staff, resulted in 569 requests for bids on current jobs. A substantial number of sales were made, Taylor said, although the survey was so recent that a complete evaluation of its results was not available yet.

Of the total contacted, Taylor said 85% were interested in components.

Trofdek, a new light weight, low cost component for use over long clear spans, has been impressive in loading test. This component, which will be available through PFS members, was tested over a 40-foot clear span with a design load of 40 pounds per square foot, live and dead load combined. It failed at 123½ pounds per square foot, more than three times the combined design load and more than four times the live design load of 30 psf.

Delta frame, according to Waring, is an attempt to provide a building design with a wide variety of uses in all sizes of service buildings. The frame, in combination with stressed skin panels and other components, is adaptable to nearly 500 building types.

The delta frame itself resembles an A-frame with dihedral wings. The span of the cantilevered wings can be varied and the building can be enclosed or open, or a combination.

"We've tried to produce something with a wide variety of uses that can be produced quickly at a reasonable cost and still deliver an attractive appearance," Waring said. "Nearly every other stock design in this field is nothing more than a box, with limited choice of conventional roof lines."

Delta frame components will be produced by PFS members and the first building using this system already is in the planning stage, he said.

The frames can be used in either square or rectangular buildings or in circular plans.

Coating developed. An announcement by Thomas E. Batey, Jr., chief of product research for DFPA, indicated another major hurdle in component construction has nearly been cleared.

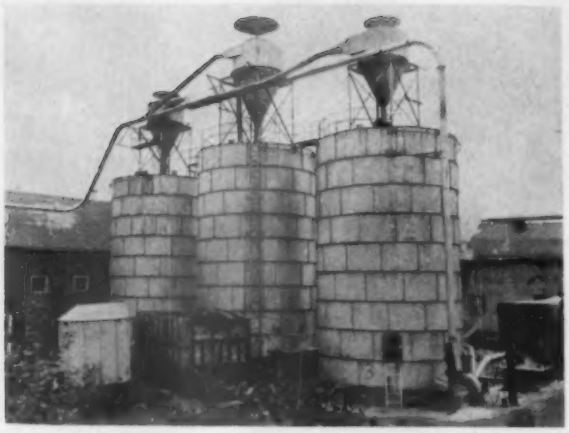
"We expect to have the problem of permanent, both shop and field-applied coatings for plywood roofs and walls licked very soon," Batey said. Already the results of research in this field indicate the coatings will be competitive in performance with anything now on the market. The final step, Batey said, is to bring down the cost of finishing materials that have performed satisfactorily under test.

Foamed-in cores. David R. Countryman, manager of research engineering for DFPA, gave the PFS members a glimpse into the future with discussions of geodesic domes and new developments in sandwich panels with foamed-in-place cores.

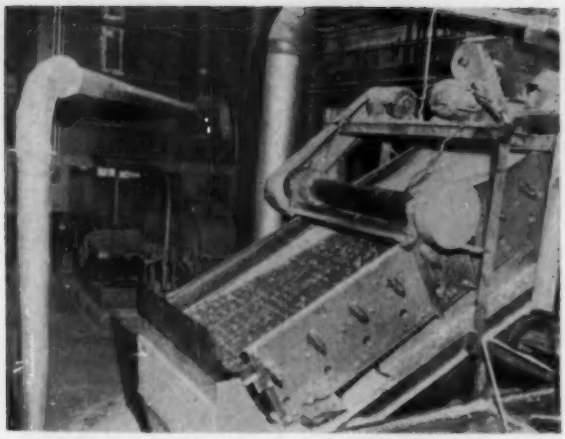
"The stressed skin panels you are producing now are today's answer," Countryman said. "But we think the future of the building panel lies in some type of foamed-in core." Countryman gave details on two systems, requiring varying amounts of capital outlay to use. He said methods are being sought now to bring down the cost of core materials.

The folded plate roof, particularly where stressed skin panels are used in its construction, is being widely adopted, Daniel H. Brown, DFPA applied research chief, told the group. He gave a report on new investigations in this field, and described the development and application of the new cathedral box beam.

Both mechanical and chemical joints were discussed. Caulking compounds and methods of application were demonstrated, along with new techniques for treating the junctions of stressed skin panels. ■■



1 Particle storage silos are each equipped with a cyclone system. Each silo holds 40 tons; total storage equals seven day's requirements of the plant.



2 Two Bauer hammermills in background process material from silos. Milled material passes over Allis-Chalmers 14 to 16-mesh screens in foreground.

Tight Quality Control, Automation Key Factors In Particle Board Plant

Employing automation and a tight quality control system, Granite Board converts over 3,000 tons of Eastern white pine per month into particle board. The resin-bonded board, which is available in thicknesses from ⅜-inch to 1⅛ inches, is light and tough.

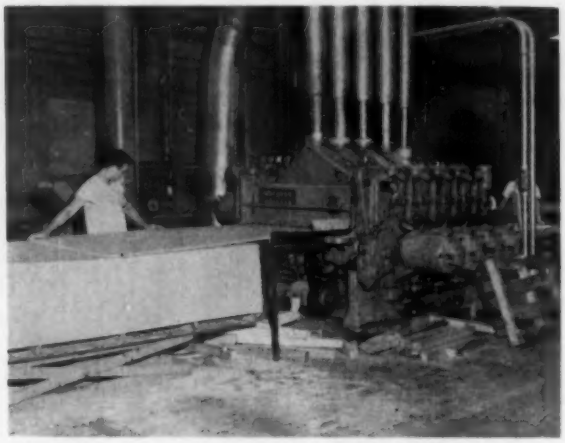
"The stability and uniformity of our board," says Herbert A. Hermsdorf, president and founder of this Goffstown, N. H., division of National Starch and Chemical Corp., "is achieved by pressing to density and sanding to thickness. We micro-sand to a plus-minus 0.005-inch tolerance to insure a smooth surface that offers maximum adhesive contact."

Granite Board operates three shifts, using a work force of 80 people. Because the manufacturing process is so highly automated, only four technicians control the actual production of board. The plant, one of the largest Eastern sources of particle board in the country, annually produces 24 million square feet.

An in-plant testing laboratory sets standards and maintains a round-the-clock evaluation on the entire manufacturing cycle. Included in the log that is kept on board production are such properties as moisture content, density, internal bond, screw pull, strength, and smoothness.

From the time the wood particles are vacuumed out of delivery trailers and cars until the finished board is cut to customer specifications, a coordinated system of automation and quality control guides the production pattern.

The first step in production is to distribute incoming wood particles by blower to three large silos. In the silos the moisture content of the particles is equalized. From the silos the particles are drawn as needed and blended. They are then sent to the screening and drying department. Two dryers, both oil-fired, are used to regulate the moisture in the particles. The primary dryer is a Heil rotary, and the secondary dryer is a Shaw stationary.



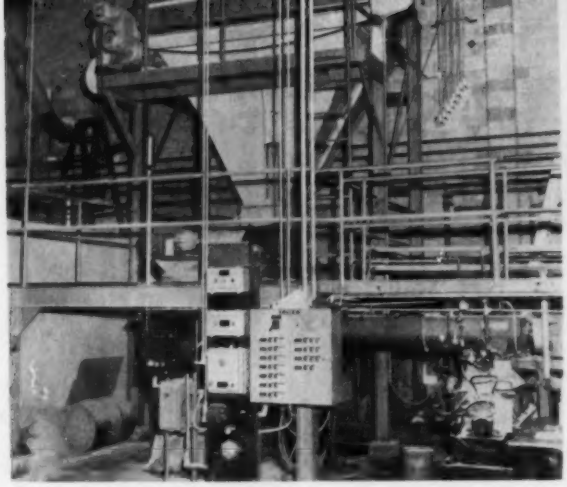
5 Eight-drum sander smooths top and bottom of board at same time, at rate of 80 to 90 feet per minute for 4-foot wide board. Both units are Yates-Americans.

The primary dryer (180 to 225 degrees F.) is a three-pass revolving drum unit, 20 feet in length. It brings the particles to a uniform moisture content of approximately 30%. A pneumatic conveyor then delivers the particles to the surge bins over the twin hammermills, which reduce them to an average size of 16 mesh, determined by a controlled screening analysis.

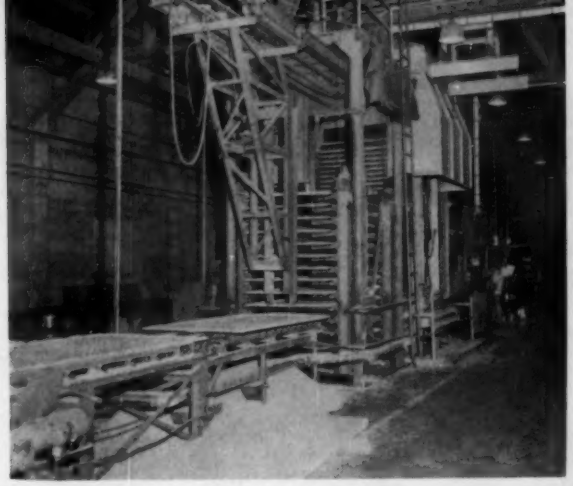
The milled particles are conveyed to the verticle lift stationary dryer, where the moisture content is reduced to 7%. From the dryer the particles follow the route pictured in the photos.

Initial forming of the board takes place on metal cauls measuring 50x100 inches. Here a mat of particles blended with resin, which may be up to seven inches thick, depending on the finished thickness desired, is deposited. The mat is compressed to about two inches in a 4-drum pre-press. Subsequently it moves onto a scale, where it is automatically weighed. The moisture content is also recorded.

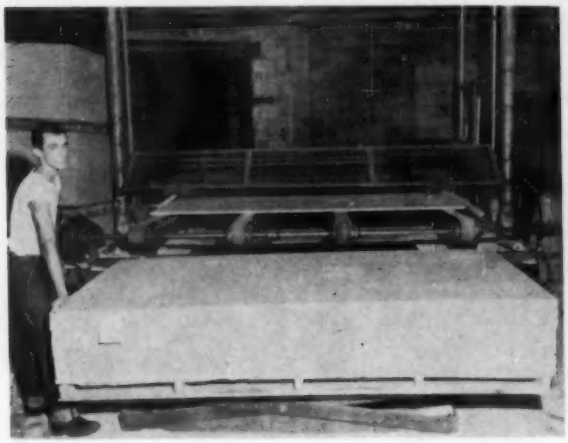
The mat then enters a steam-heated, multi-platen hot press. The temperature (280 to 330 degrees F.) and



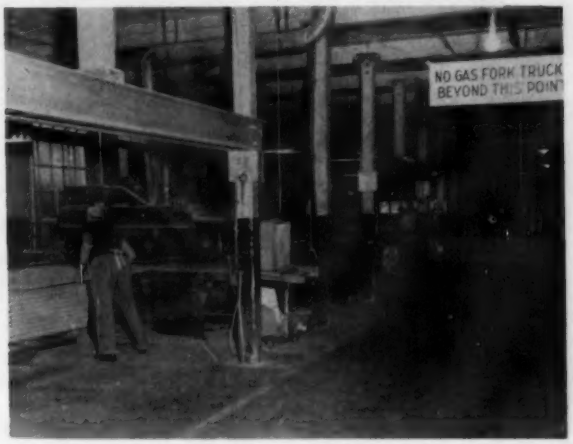
3 Particles are stored in this overhead hopper, are metered out as needed. Link-Belt screw conveyor, lower center, carries particles to blender at right for resin.



4 Board is pressed in 15-opening Siempelkamp hot press. Automatic loader and unloader are from American. The pre-press is in the background.



6 Ends of board are trimmed by this American trimmer after a similar unit has trimmed the edges. All trim saws are carbide-tipped.



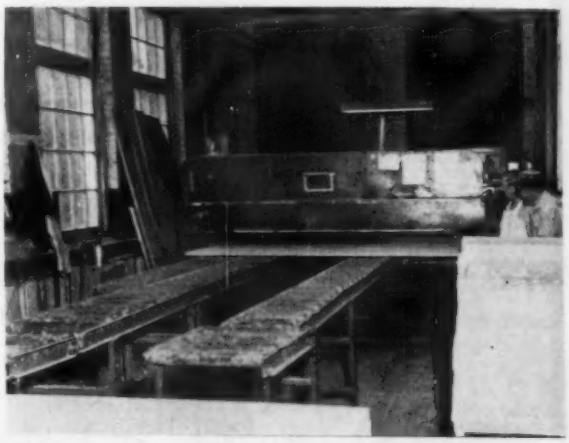
7 Cut-up and gluing department is completely conveyorized. Yates-American saw in foreground cuts 4-foot boards lengthwise; further cuts, per orders, are made in background.

pressure (200 psi to 600 psi) on the plantens vary with the type of board being made. Each board remains in the hot press 6 to 18 minutes, depending on density and other specifications.

After the press opens, the boards are automatically transferred by roller conveyor to a vacuum separator, where they are picked up. The cauls, which are cleaned by compressed air and cooled by a fine spray of water, are carried back to the hot press on a cross conveyor. The boards are transported to the saws, where they are automatically trimmed. Allowed to slowly cool and cure for 48 to 72 hours, they are next sanded to thickness on an 8-drum sander. The finished boards are inspected individually for quality before they are labelled ready for shipment.

Principal Equipment

BUFFALO INDUSTRIAL exhauster; BAUER hammermills; WESTINGHOUSE motors; ALLIS-CHALMERS screens; LINK-BELT screw conveyors; SIEMPELKAMP hot press; AMERICAN press loader and unloader; YATES-AMERICAN sanders; AMERICAN trimmer; ACME steel strapping; YALE fork lifts; YATES-AMERICAN cut-up saw; RAYBOND electronic edge-gluer; HEIL rotary dryer; SHAW stationary dryer.



8 Edge gluing is done on the Raybond electronic edge gluer. Passage of the boards takes 2 to 3 minutes, depending on the thickness. ■■

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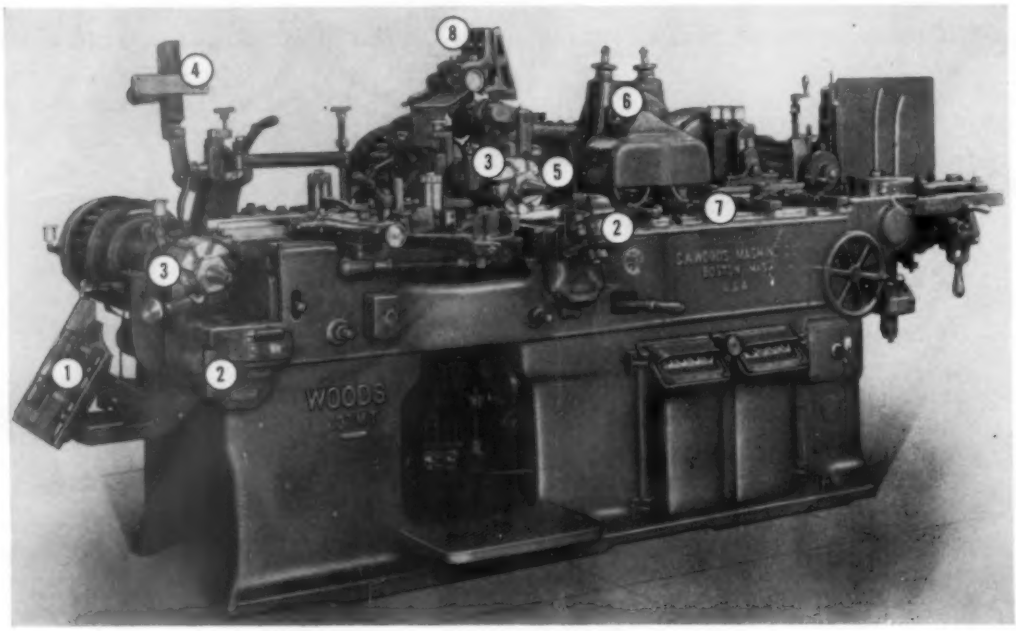

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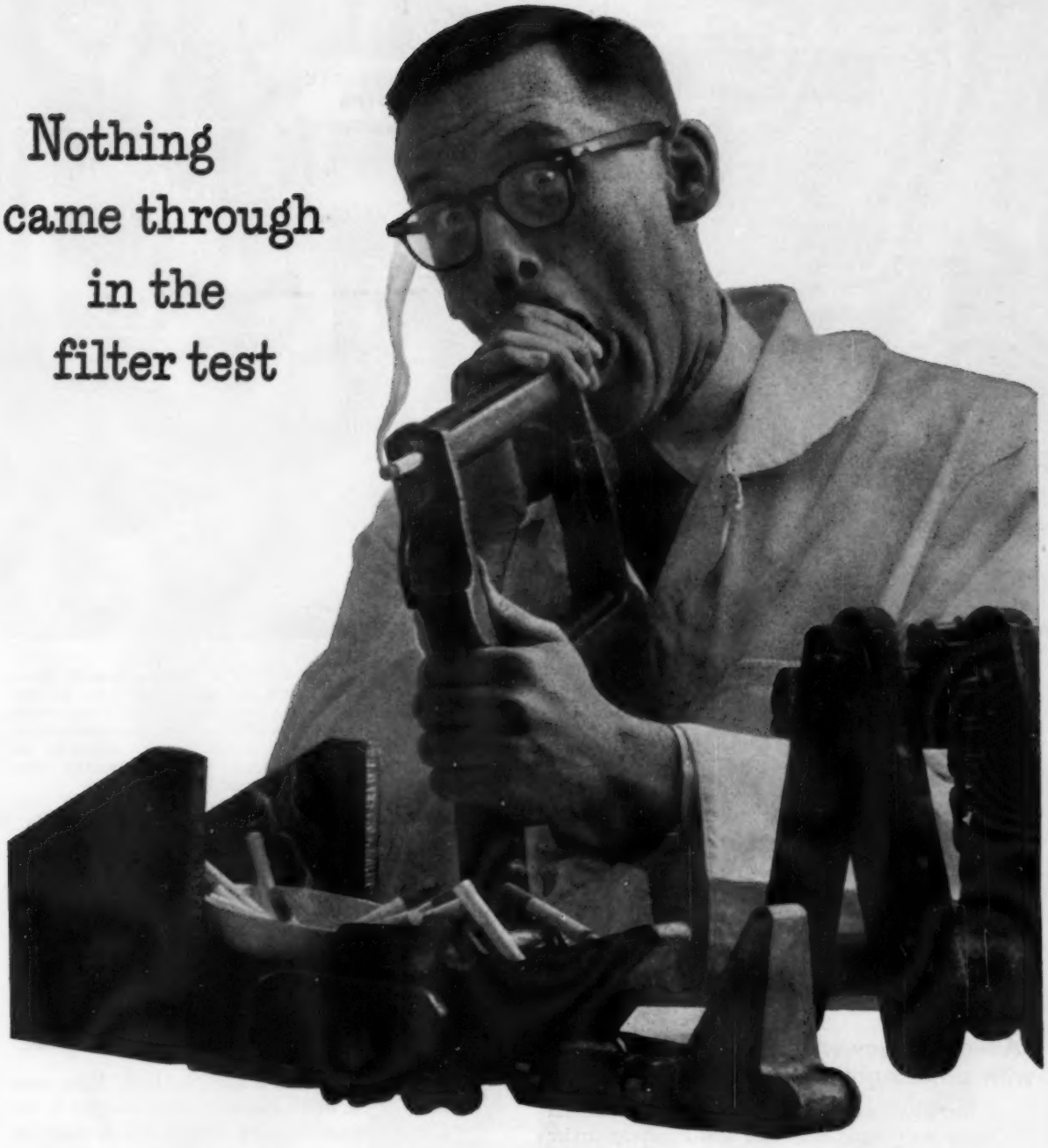

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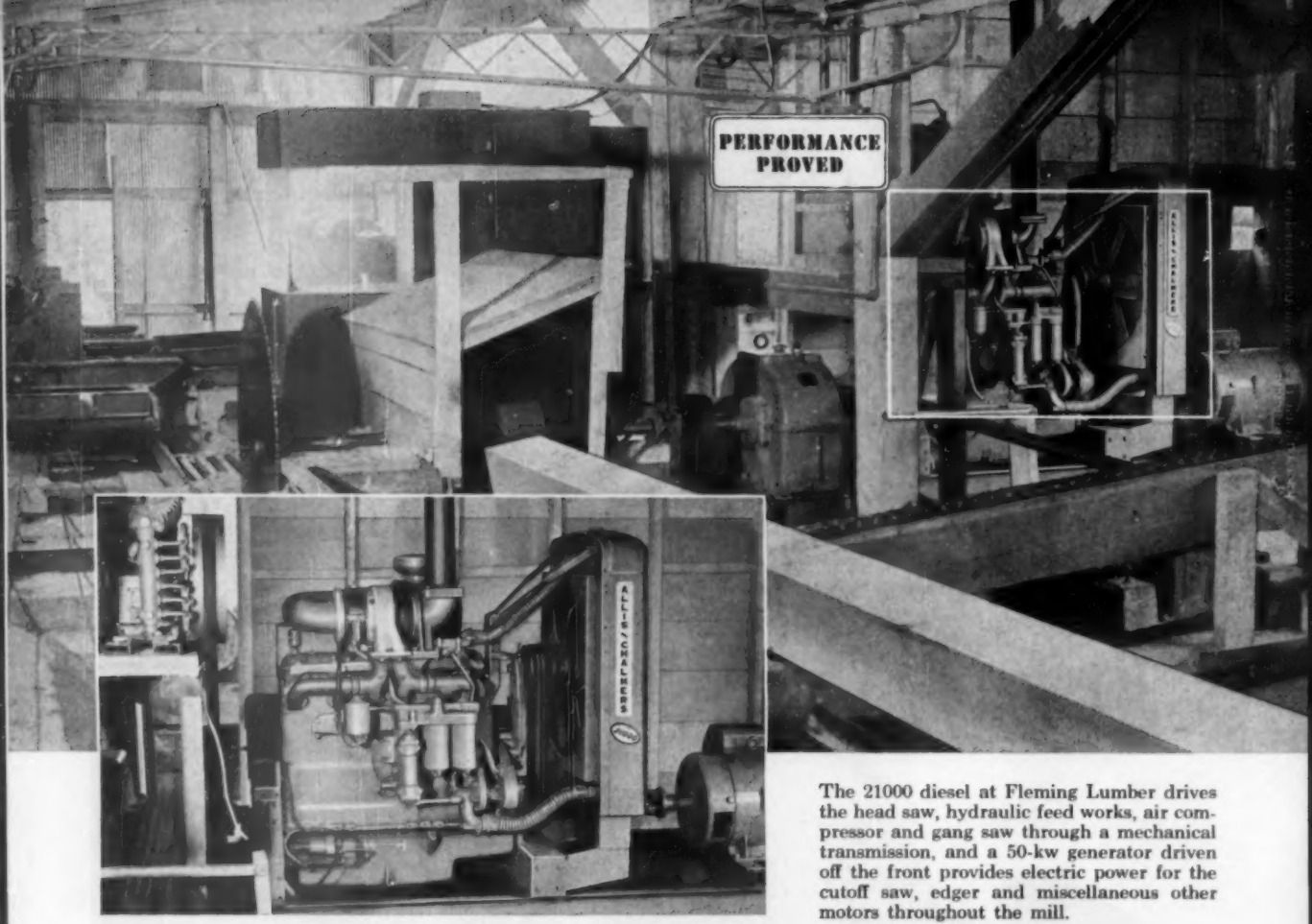

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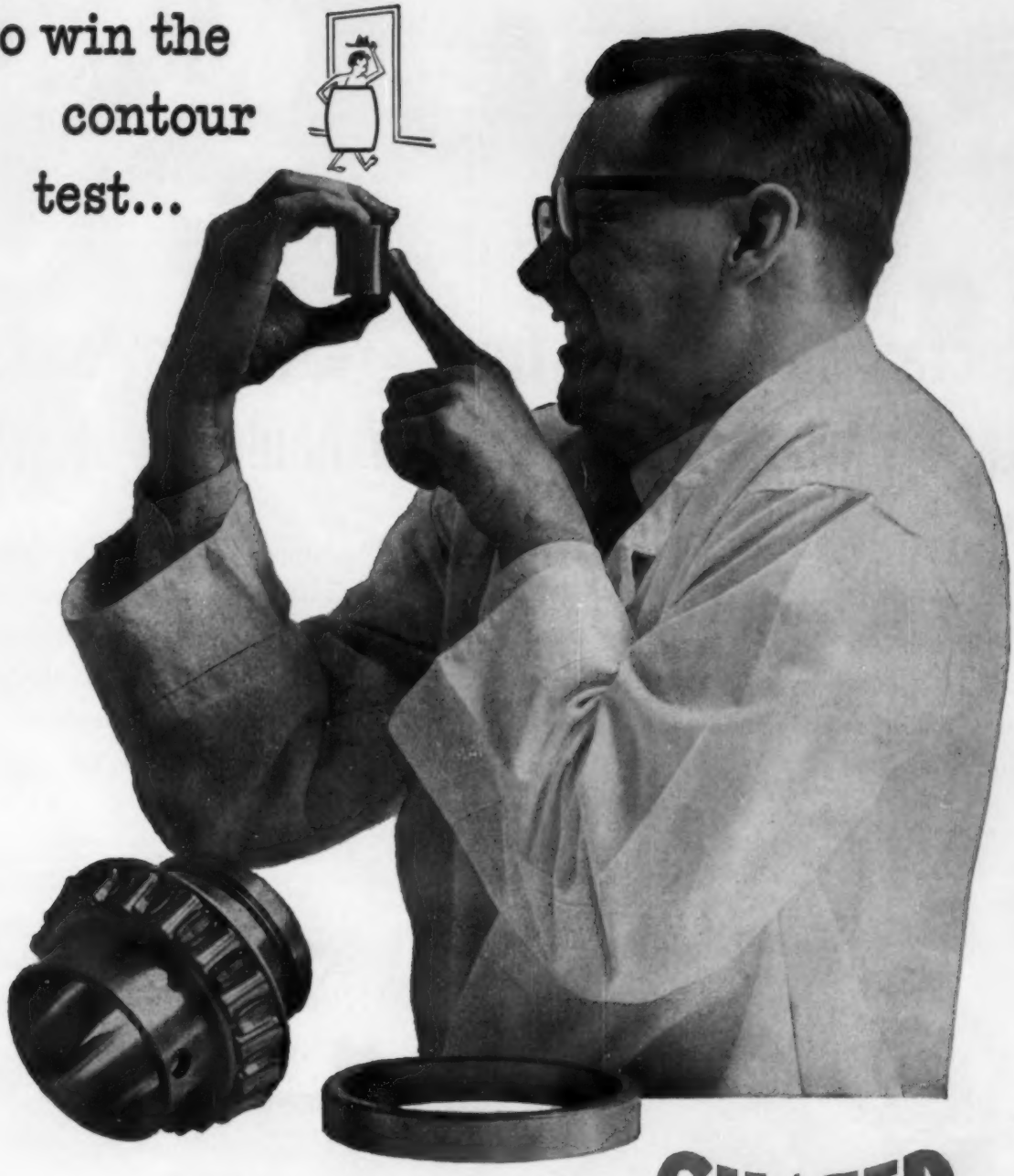

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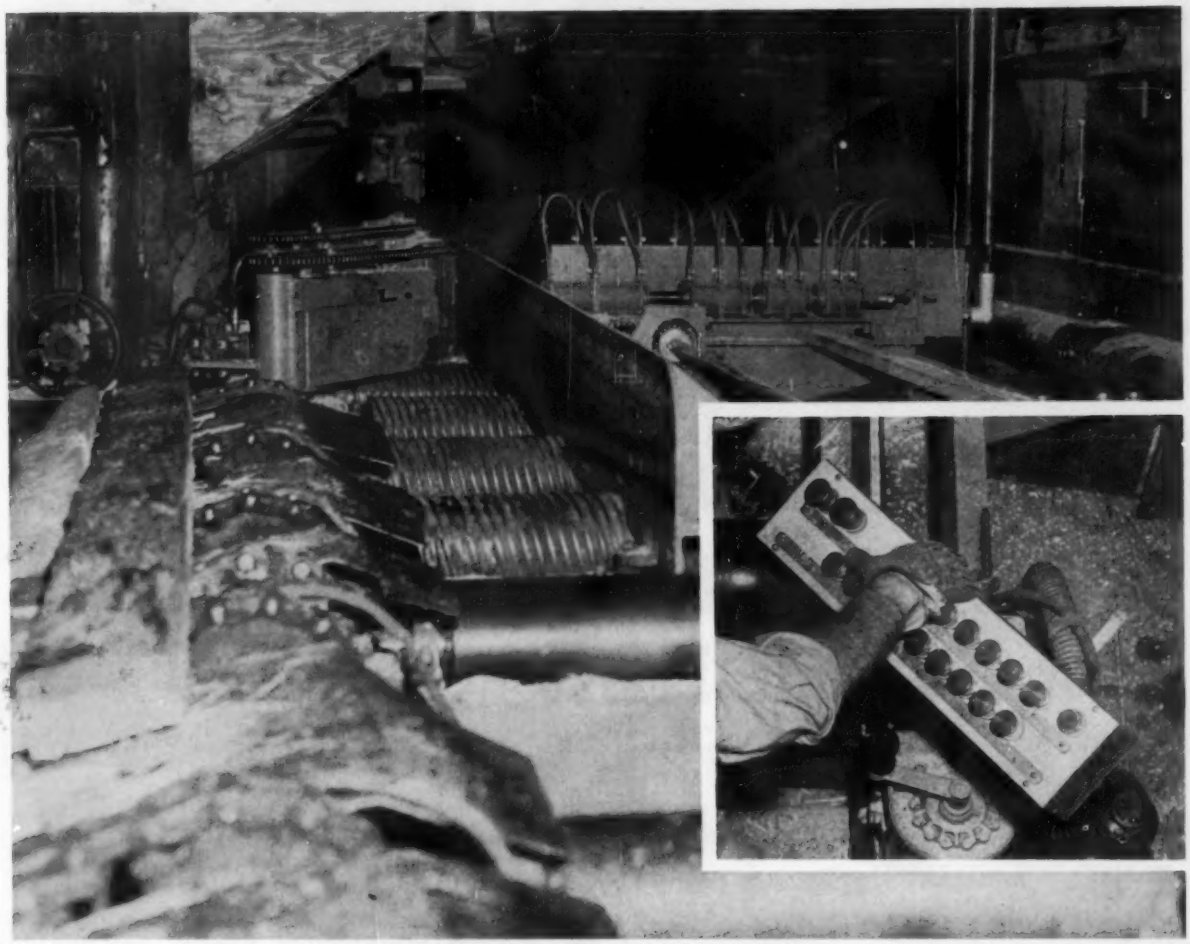

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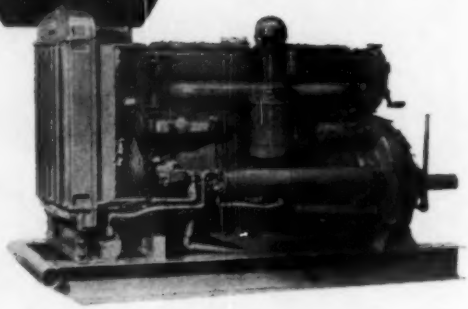

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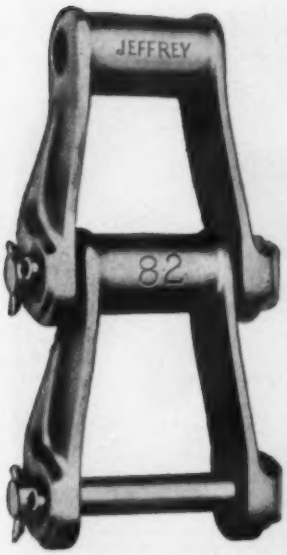

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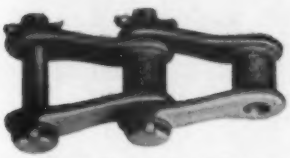

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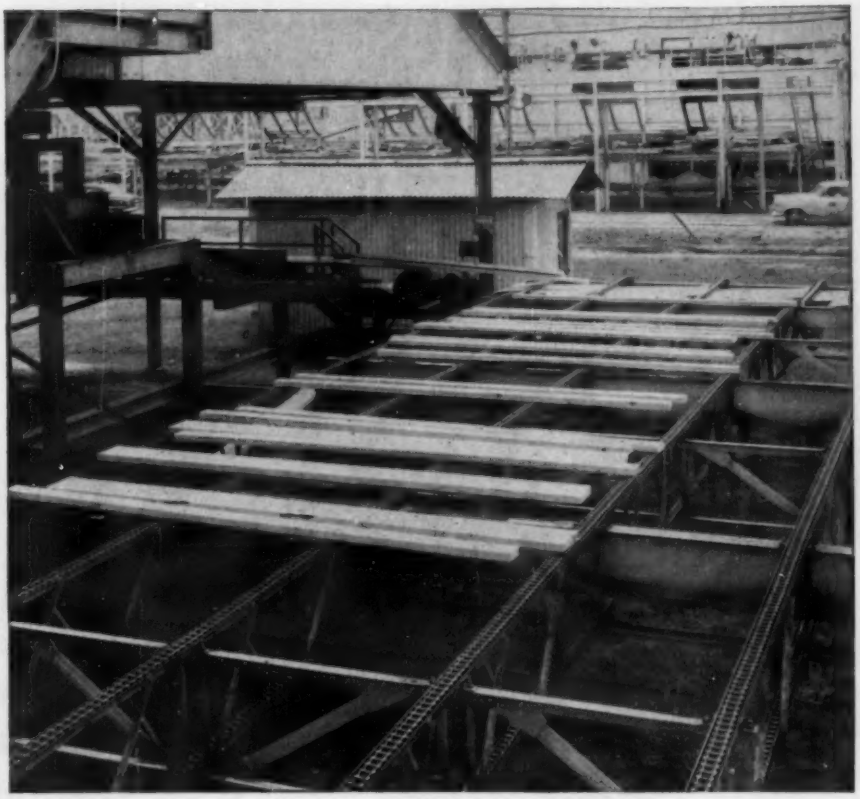

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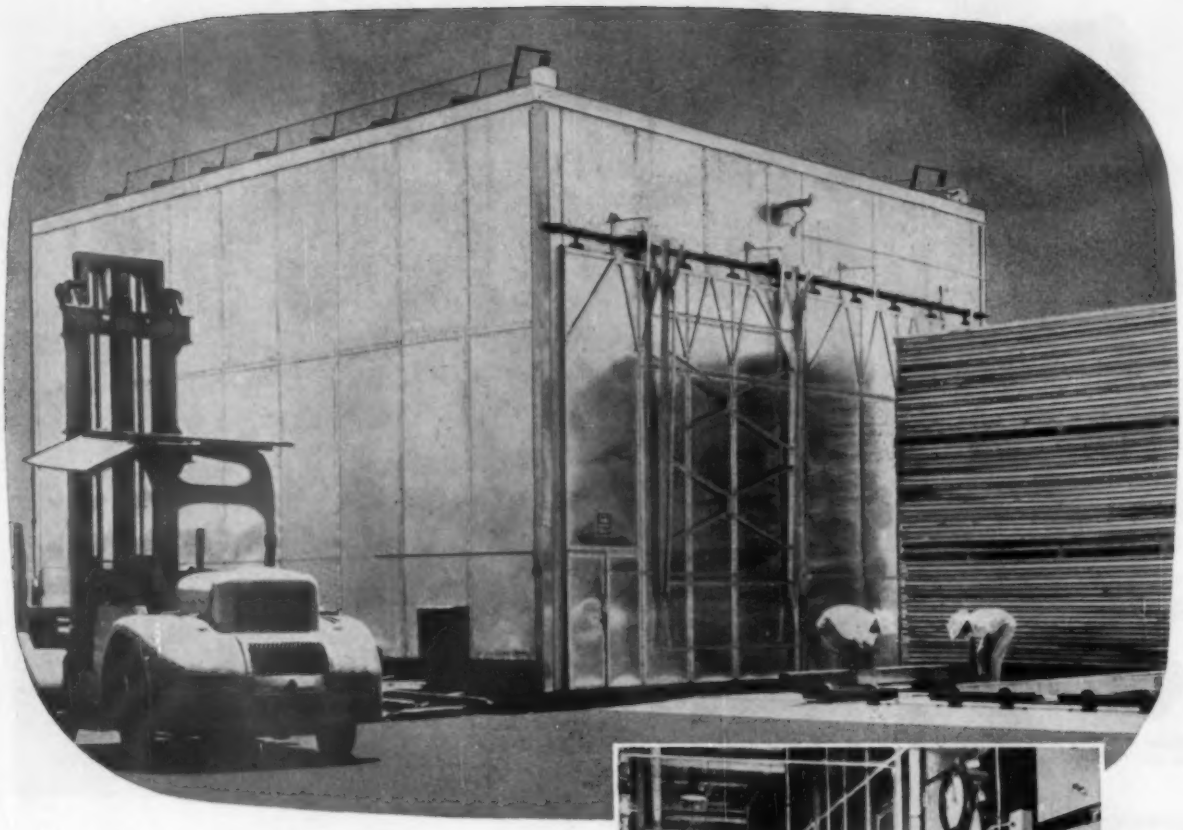

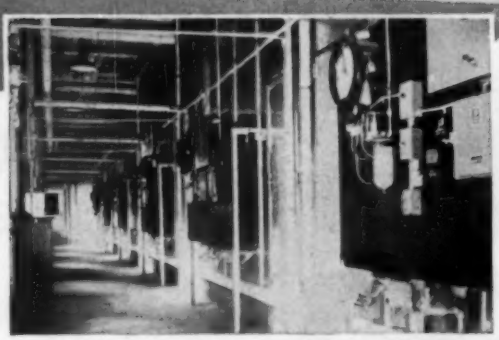

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Look for this sign—your guarantee of dependable performance, American standard dimensions and **immediate** availability of parts. Check these mechanical features—10 reasons why Mill Engineering leads the field in gangsaw manufacturing.

1. Optional electrically-controlled automatic over-hang synchronized to rate of feed. Eliminates **all** log sorting, reduces drag, standardizes saw hanging methods.

2. Super-tough cast steel alloy sash cross beams; seamless steel tubing columns — exclusive narrow design minimizes stresses of bending and vibration.

3. Steel side frames and base of box section, welded and stress relieved on the SUNBO.

4. Air-operated pressure rolls for quick, positive adjustment.

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6. Self-aligning, extra strong guide blocks with interchangeable, heat resistant lining strips.

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8. Large diameter cast steel feedrolls, press fitted and keyed on shaft, swing for quick saw adjustment. Self-cleaning teeth.

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The SUNBO is the end product of 25 years of continuous gangsaw engineering—first to be manufactured on American soil—to suit American needs. Mill Engineering pioneered gangsaw design in this country and still remains the most imitated manufacturer in the field.

The adjustable overhang of the saws to obtain clearance of the teeth on the upstroke at different rates of feed plus high speed and long stroke, has been proven again and again to be the most satisfactory method of operation. In addition to getting a *full cut* on each down stroke, there is considerably less vibration than in oscillating or ratchet feed types. These important features, coupled with Mill Engineering's many design exclusives, enable the SUNBO or SUPER to operate at speeds in excess of 300 RPM —maintaining high production rates with a greater margin of safety. *Before you invest, check with Mill Engineering—America's pioneer manufacturer of gangsaws—exclusively.*

See page 66 of this issue for story of Sunbo installation in Emerson & Holmes Lumber Co., at White Sulphur Springs, Montana

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CUTS TRIMMING COSTS
80%

***ABOVE:** Willamette Plywood Corp., Aumsville, Oregon, cut their skin and trim costs 80% when they installed two new Jenkins 192's with transfer table. Former sizing costs were $1.25 per thousand. New costs are only 25¢/M. Jenkins speed, accuracy and ruggedness are showing big savings for plants throughout the industry.*

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The most accurate and durable feed chain in the industry. Moly-impregnated phenolic laminate bearings running in half round bearing bronze track eliminate *all* sidewise movement, will not seize or gall. Half round bearings under *every link* give 10 - 50% more bearing surface than any other chains — links are precision milled and ground from solid alloy steel. Mating sprocket and link radii are induction hardened for long wear. Track has automatic pressure lubrication.

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EASY AS ROLLING OFF A LOG!

At Moser Lumber Co., Naperville, Ill., Idea No. U5-4 is viewed by Acme Idea Man W. C. Saari, who helped develop it.

Here's how Moser Lumber Company gives high handling costs the slip. Lumber orders like this used to be hand-loaded and unloaded piece by piece. Loading took two hours, unloading one hour.

Today, with the help of Acme Steel Strapping, Stretcher and Sealer, the entire order is unitized into a single load. It's assembled, strapped, and then loaded by lift-truck in less than 30 minutes . . . slipped off in "one piece" in a couple of minutes from roller bed trucks.

Such solutions to costly problems have made Acme Steel the leader in steel strapping methods. For more facts call your Acme Idea Man or send the coupon below.

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Please send me Idea No. U5-4 and examples of how major companies in my field use Acme Steel Strapping.

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White Sulphur Springs is considered by VKV Lumber Co. to be an ideal year-round air-drying site. Favorable winds and lack of excessive moisture dries lumber that is well accepted by contractors throughout the prairie region. Panoramic view shows air-drying yard, log storage decks, planing mill, sawmill, stud mill and townsite . . . latter seen at far right.

Jack Finnegan, manager VKV, describes lumber produced in area as fine grain Douglas fir old-growth, going mainly into construction; lodgepole pine with good nail-taking and holding properties; high percentage of No. 1 studs; small, tight knots are desirable quality and lightweight when dried to 14 to 15% moisture content.

Small Logs Mean Big Business To Montana Lodgepole Sawmills

New and expanding mills in eastern Montana are boosting the state's importance in the wood producing industry. THE LUMBERMAN reports on major mills in the expanding White Sulphur Springs area and in eastern Montana which yesterday relied heavily on selling pulp wood to the Lake States paper mills, but which today are major producers of lodgepole pine and Douglas fir lumber.

Timber has always been an important commodity in eastern Montana, but large scale lumber manufacturing operations are of relatively recent origin. Well-known in the pulp and paper industry as a long-time supplier of pulpwood to Lake States mills, the White Sulphur Springs district now has a productive capacity of over 300,000 bd. ft. per shift.

An increase in freight rates in recent years has all but killed the pulpwood traffic. The large Corcoran Pulpwood Co., for instance, has turned its attention to the lumber industry.

Most of the new operators in the area have previously been in business in the West Coast states. Names that will become more familiar with Montana's future are VKV Lumber Co., Douglas Studs, Inc., and Bates & Kessler Lumber Co. These firms have already made substantial investments and are plowing more money into equipment.

The several hundred thousand board feet of lumber which are sawn each day in the White Sulphur Springs area mills have brought new prosperity to that region. Utilities and civic services are hard pressed to serve the year-round population of lumbermen, loggers and their families.

Log supplies come from both national forest and private lands, the latter being mainly on large cattle ranches at the lower elevations. Some recent fairly large U. S. Forest Service timber sales offer operators several years' supply and will enable them to finance new equipment.

New operators are faced with several problems. Experienced local help is difficult to obtain: new men must be trained before they can be safe and efficient workers: Logs are mostly all small lodgepole pine: Douglas fir of reasonable large diameter has severe taper and often contains shake and large knots.

Advantages are many. Those who are willing to face hardships of weather, long distance from labor markets (one mill periodically flys in an electrician from its Oregon operation), from supplies and parts suppliers find stumpage more easily than they did on the West Coast. They also find they are much closer to markets. Their products sell readily and have many outstanding qualities.

Another attraction is the fact that Montana is rapidly swinging over to a pulp economy. Most mills are sufficiently close to pulp plants to justify barking and chipping installations. The new and expanding Waldorf-Hoerner Paper Products Co. pulp and paper mill at Missoula now considers White Sulphur Springs an importaant long-range source of raw material.

In the late fall, VKV Lumber Co. installed a new Soderhamn Cambio barker and chipper; Douglas Studs and B&K are making plans for similar moves.

Stud log diameters run 20" maximum. They average 12 to 13" for Douglas fir and 10" for lodgepole pine. Lengths are 100". At VKV anything over 20" is sent through the double circular or gang mill which are operating under contract by Emerson & Holmes. Ponderosa pine and Englemann spruce are minor species.

When VKV is in full swing with

Log and Lumber Handling Methods

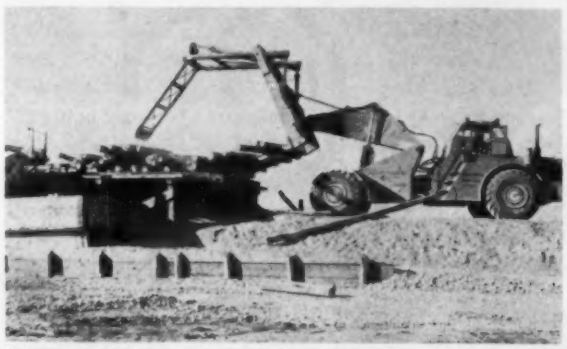
Log handling at B&K Lumber Co. is with a Michigan 175A rubber-tired front-end loader. Logs range from 6" tops to 4' butts.

Unloading trucks, decking and yard handling of logs at VKV Lumber Co. is also with Michigan 175A with Waukesha diesel.

Wagner Scoopmobile 1010 with hydraulic forks has job of feeding small-log and stud mills from the deck at VKV.

Front end grapple and fork on Wagner *Lumber-Jack*, unloads, decks, and feeds mill at Yellowstone Lumber Co.

Fast handling of logs at Douglas Studs, Inc., is with this Wagner *Lumber-Jack* picking up full truck load at one bite.



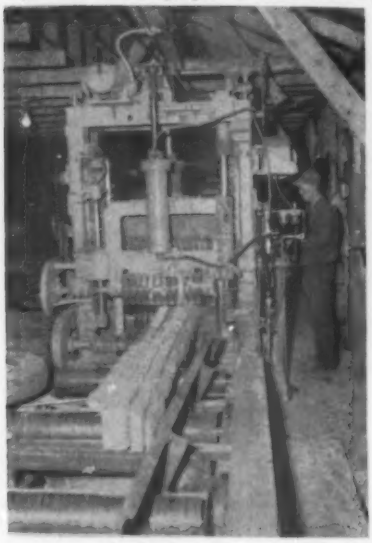
Logs are fed directly to mill or stored in cradles. Loads are placed on live chains ahead of cutoff.

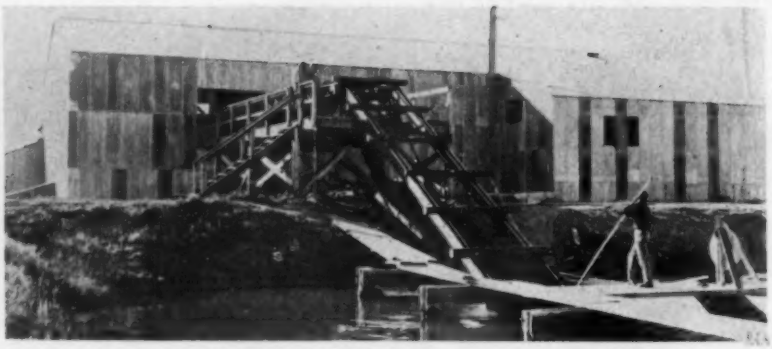
large-log and stud mills operating, the production should be around 100M bd. ft. per shift. In addition, the company purchases a fairly large amount of rough lumber from portable mills.

Some of the advances in mechanization have been in the log-handling machines, several pictured with this article. The old-style large log pond appears to be a thing of the past, although Douglas Studs enjoys the advantage of clean, washed logs to work with due to its small pond between cut-off saw and bull chain.

Lumber handling at VKV and stacking in warehouse is with a fork lift truck.

More on Lodgepole Pine on following pages

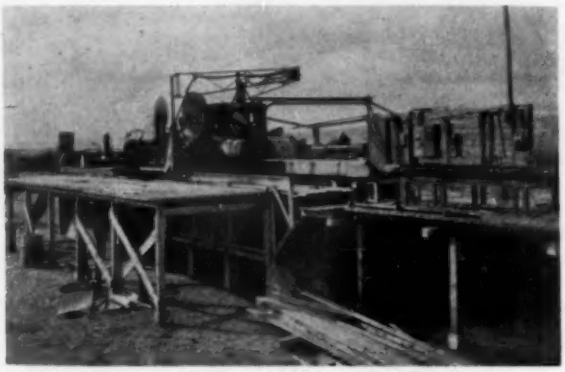




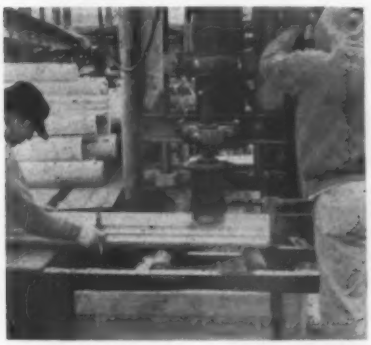
Douglas Studs, Inc., has a modern high speed Scragg mill with edger, trimmer and package stacker. Cuts 100M bd. ft. per shift of 2x4s. It is one of the most modern mills in the area. It is owned by Jack Buchanan.

Cant Gang, 30-inch Mill Engineering and Supply unit, auguments production of a circular headrig at Emerson & Holmes mill, White Sulphur Springs.

Emmett Roatch, formerly in pulpwood business, now produces lumber at five outlying portable mills. Rough lumber is trucked to sorting site above. Packaged lumber goes to nearby VKV mill for surfacing. Mill cuts Douglas fir 2x4 to 2x12. Sawing and conveyor systems (now covered) are powered with two Wisconsin air-cooled gas engines, one on Corley 2-saw trimmer, other on sorting chains.



Electrified mill (now covered) was built by Bates & Kessler Lumber Co. Mill has Calvert remote carriage, double circular headrig. Ten men comprise crew. Plant cuts 30M bd. ft. daily. Next step includes a gang mill, planer, barker and chipper system.



Using short lengths, up to 10' lodgepole pine, Lumber Enterprises, Gallatin Gateway, Mont., produces pre-cut logs for buildings. **Left,** logs are turned on lathe 6 to 8 inches in diameter, treated, trimmed, grooved, dried and shaped according to building plans. Complete set of log parts are tagged according to blueprints and shipped to job site for assembly. **Center photo,** shows grooved logs to hold door and window frames in place and provide room for insulation insert. Logs have been used for churches, homes, motels and other small structures in Rocky Mountain and plains states. **Right photo** shows how corners fit snugly.

High Utilization Vital to Lodgepole Producers

Cutting nearly 30 million board feet of lumber annually, Downer Lumber Co., Livingston, Mont., is the largest producer in eastern Montana. The firm specializes in manufacturing kiln-dried lodgepole pine and markets its premium products under the trade name of "Birds-Eye Pine."

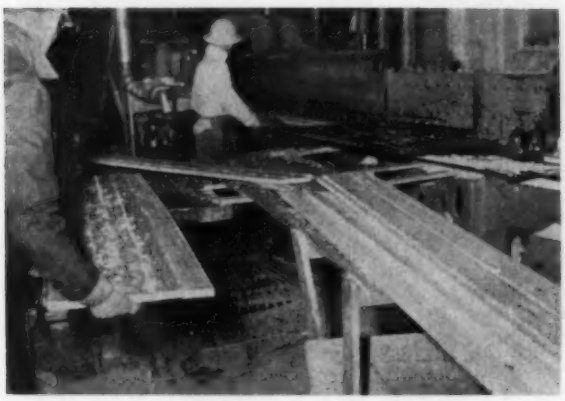
About 200 people are employed. Two shifts run per day to produce a total of 230,000 bd. ft. Average log diameter is 10 inches, which means cutting of some 1800 logs per shift.

The Downer glue-up department is a major operation producing many carloads of wide boards for the furniture and millwork industries of the country. The main sawmill is all-electric and has two band headrigs, a horizontal resaw and two gangs for breakdown equipment.

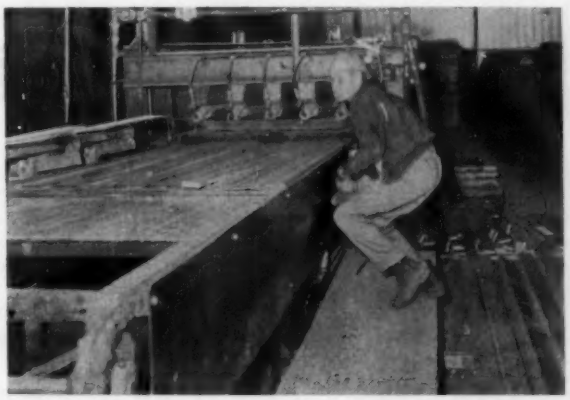
Mr. Downer employed the testing facilities of Montana State College at Bozeman to determine strength characteristics of lodgepole pine and inland Douglas fir. Random-selected lumber from the mill was tested. Results showed that knots do not have any important effect on strength.

"The future use of lodgepole pine structurally is quite bright," says Mr. Downer, "but much work is needed in this field." Tests showed lodgepole pine in the area to have a static bending (psi) of 5500 and a rupture of 9400; inland Douglas fir a static bending of 6800 and rupture of 11,300. "It is easy to work, light, takes a beautiful finish and performs well in kiln drying," he stated.

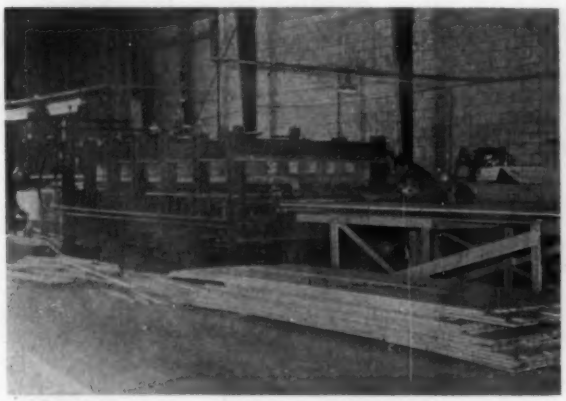
One of the principle problems is the handling of many narrow widths and short lengths and large percentage of common lumber. Early resistance was due to poor manufacturing techniques of small mills and inadequate drying, which has been largely overcome today. Cost of stumpage and logging and handling are among the many problems.



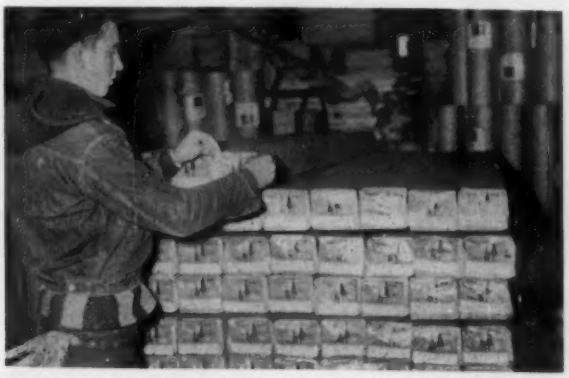
Linderman gluing machine cuts a taper, dovetails, joins and glues narrow pieces to make 1x12's. Edgings are rerun and glued up into wider panels. 1x4's are main raw material for glue-up. Peter Cooper protein adhesive is used.



As course of boards is laid up on press bed, operator reaches down to activate controls, moving lumber into position for the press. Pressing time is 2 to 2½ minutes at 310° F. temperature. Daily output averages 5000 bd. ft.



Steam-heated hot press, built by Downer, does actual curing of the edge glue line. Panels up to 16′ long and widths to 4′ can be produced in the press. American-Marietta urea glue is used. An adapted Yates machine joints lumber.



Paneling is wrapped in kraft paper and identified with trademark label on each end. Package pictured contains 1x6 "BirdsEye Pine" panels. Package is assembled on jig containing 10 panels. Two men wrap 55 packages an hour. Wide panels are not packaged.

More LODGEPOLE PINE next page

Steam heated log pond (70° in winter) is used for keeping steady flow logs for Yellowstone Pine Lumber mill. Pond is for storage of logs between cold deck and sawmill. Logs are kept in pond only a few hours at a time.

Edge-Glued Lumber Profitable Lodgepole Use

Outstanding utilization of the peewee lodgepole pine logs is the highlight of the manufacturing operations of the Yellowstone Pine Lumber Co., at Belgrade, in eastern Montana. This is one of the major operations in the lodgepole pine belt of the state. Gluing up of narrow widths is one of the methods which extends utilization from each log. The company helped pave the way for commercial acceptance of lodgepole pine lumber products.

The mill cuts 50M bd. ft. per shift. Minimum diameter of log at the small end is 5½". In the sawmill, any slab which will cut out a 1x2", 6' long board is run through straight-line rip saws to obtain near 100% utilization. Use of bark-free slabs and edgings is a future possibility.

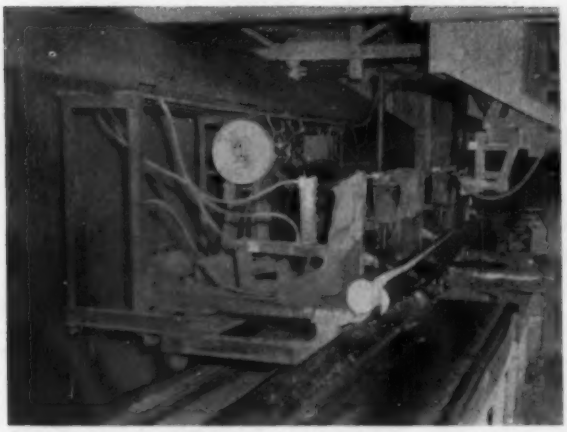
Biggest problem is the handling of the excessive number of pieces, either logs or boards, which must be cut to produce 1000 board feet. Approximately 10% of the output of the company is in the form of glued-up lumber.

Acceptance of lodgepole pine as a standard lumber product was a major sales problem which mills such as Yellowstone Pine and Downer Lumber Co. had to solve over a period of years. Drying and milling problems had to be ironed out.

Glued-up lodgepole, however, has been relatively trouble-free operation.

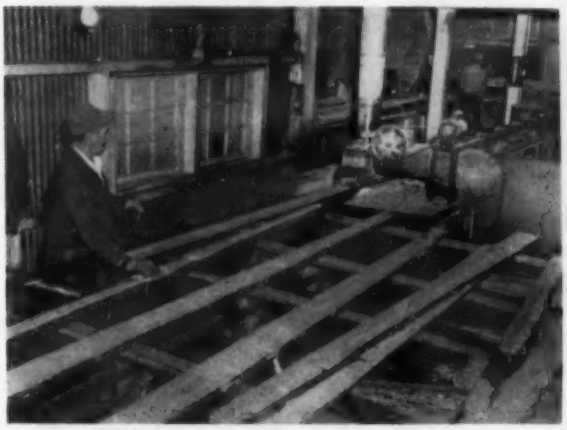
◀**4x8' glued up lodgepole pine boards** make ideal sheathing. Panels of this size have yet to reach full potential in construction markets. Light weight makes them adaptable for many construction uses. Recommended use is to let them condition to room moisture content before installing and painting.

Lodgepole WP-2 paneling ready for shipment. To build acceptance, the company first sent thousands of samples to potential markets. Practice continues as part of sales program.

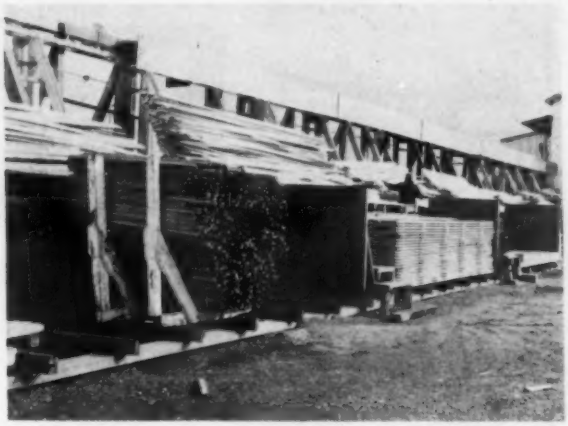


The Yellowstone Pine 6′ band headrig breaks down small logs on remote-controlled carriage. Production averages 50M bd. ft. daily. Small logs measure about 5½″ at small end. Large logs run 24″.

Horizontaal Band Resaw speeds production at Yellowstone. Cants 4″ and thicker are cut on one side and thinner pieces on the other. Final product is 1″ boards. Note merry-go-round system.

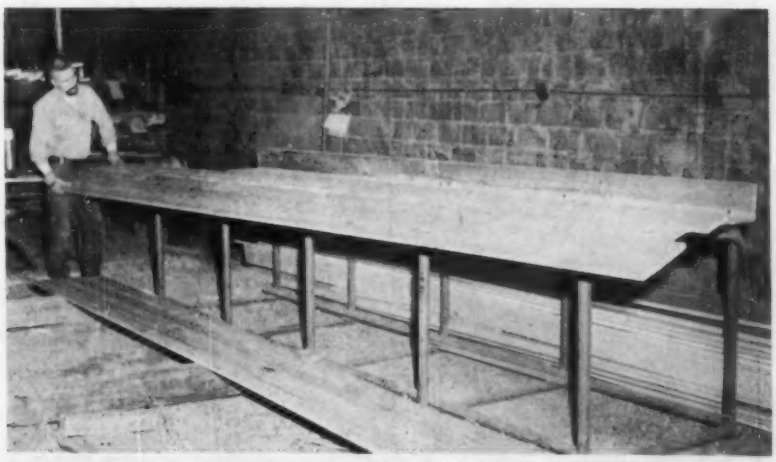


Two Straight-Line rip saws are used in place of a conventional edger at Yellowstone, due to high lumber production of small logs. Boards travel directly from rip saw through trimmer and sorter.



Lumber sorter drops lumber into stacking bins to be hand-stickered for kilns. All lumber produced is kiln dried to average of 7-10%. This is slightly under regular specifications of 11%.

Western Pine WP-2 is popular item, here emerging from Stetson-Ross 126 pattern machine at rate of 250 fpm. Nonpattern is run S4S on Stetson 6-10-A1 planer at 280 fpm.



1x5″ boards and narrow strips are glued up to make 4′ widths and lengths up to 16′. Casco resin 5H is used for edge gluing. Subflooring and sheathing are popular products. ■■

Prineville F. D. Knees . . . .

installed at Ellingson Timber Company, Izee Mill

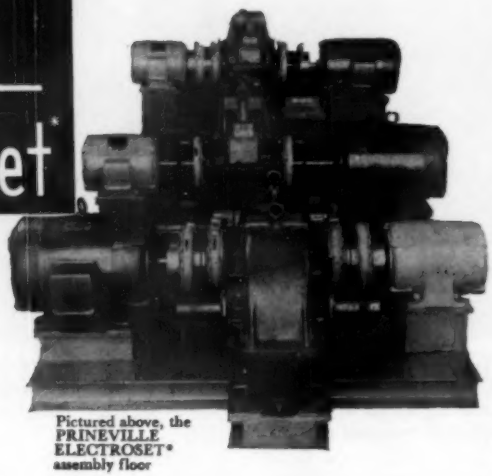
Says Sig Ellingson:

"The new knees have made this carriage the best in any of our mills. . . ."

Mr. "Chappo,"
superintendent of the Izee Mill:

"These knees are the best available to the industry without exception. I would recommend them to anybody . . ."

Plus Prineville Electro-Set*



Pictured above, the PRINEVILLE ELECTROSET* assembly floor

Recently installed at Hudspeth Pine, Prineville

Says Don Miller,
asst. mgr. of Hudspeth Pine:

"We replaced another make of automatic carriage setworks with the PRINEVILLE ELECTRO-SET. Now we are getting exceptionally well-manufactured lumber. We highly recommend the PRINEVILLE ELECTRO-SET to all sawmill operators."

. . . and a New Big Plus

the all new Pritonic Fully Automatic Sawguide Control

It's foolproof . . . cannot come down into the log.

* *Patented under U. S. Patent No. 2739626*

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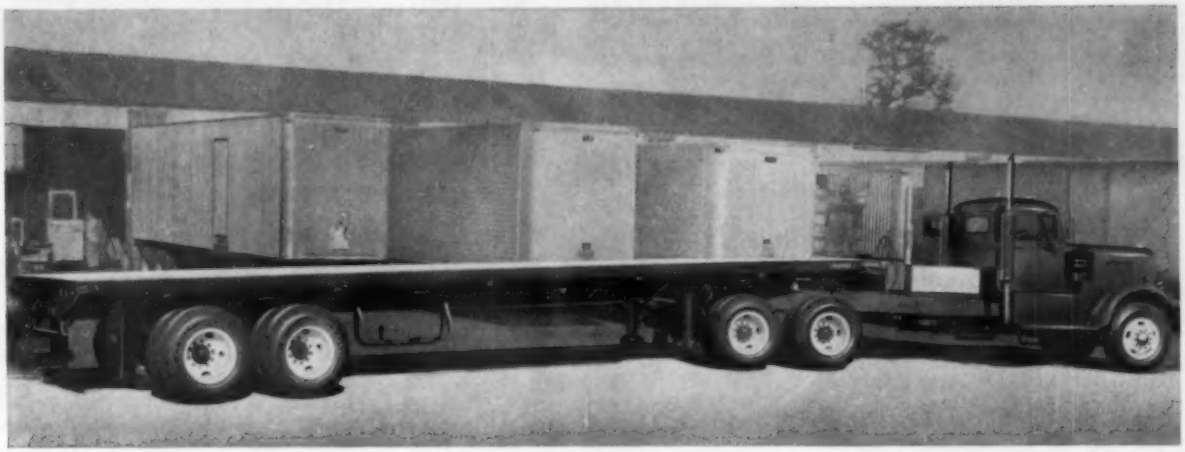
New, Fully-Interchangeable Fruehauf Thoroughbreds Let You Choose The Exact Platform You Want



Newly designed Fruehauf Longitudinal Board Platforms offer complete interchangeability of aluminum and steel components. You may order your Fruehauf Platforms with *all*-steel or *all*-aluminum components . . . or any combination of steel and aluminum. This exclusive Fruehauf feature gives you the choice of a flatbed built to the weight and strength specifications *you* need.

Where super strength and budget price are the considerations, a Fruehauf *all-steel* Thoroughbred, with deep-fabricated high-tensile steel main frame and full-width structural cross-members, is the answer.

The *aluminum* Thoroughbred gives platform operators the lightest possible weight yet is super strong all the way through, since the primary structure is high-tensile steel. Both steel and aluminum units are available as short semis and 4-wheelers for combined operations.

For those operators who want to combine steel and aluminum components, there's such a wide variety of options that you practically design your own Trailer! Call now for *full*, money-saving details.

▲ Upland Freight Lines recently added to its 100% Fruehauf fleet with six new Thoroughbred Platforms for contract hauling of steel and tin coil. "When you haul coils of tin plate," reports owner Gerald R. Wilson, "you need a completely dependable but lightweight flatbed Trailer really built to take it. Heavy, compact loads like this require a unit with minimum deflection, engineered to stay on the road."

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FRUEHAUF TRAILERS

Research Men Discuss Products, Processes

RETIRING PRESIDENT R. E. Jones, Lumber By-Products, Spokane, Wash., hands gavel to new president Steele Barnett, Boise Cascade Corp., Boise, Ida., at session in Spokane. John P. Howe, forestry school at University of Idaho, is new secretary-manager of the Wood Products Clinic and the Inland Empire section of the FPRS, which participates in the Clinic program. New president of the Inland FPRS section is R. J. Hoyle, Jr., Potlatch Forest, Inc., Lewiston, Ida.

Researchers Comment on Industry Trends

At a clinic session, the audience was divided into groups with assigned topics to discuss. They later reported their conclusions.

Topics and conclusions include:

Impact of association grade marking. It will ultimately be good for the industry. It was suggested non-association members either join the associations or funnel their output through larger mills which are members.

Quality control should start in the woods with the log buyer. And more attention should be paid to quality rather than size. Few mills employ scientific quality control. Quality control is best applied when the end use of stock is known when it enters the production cycle. Quality control is particularly important in end gluing. The associations should set up grading systems for end gluing.

Can lumber sizes be standardized? No, not a 100%. To do so would require complete organization of all lumber producers.

Is wood treatment essential? Yes, if the industry is to remain competitive.

Rough lumber manufacturing tolerances very often result from the "Topsy" mill which "just grew" and includes obsolete equipment.

Secondary manufacturing opportunities existing at the primary plant include cut stock, molding, laminated beams, finger jointing, edge gluing, overlays, beam parts and prefinishing.

Truck vs. rail. Not enough technical advances have been made to materially change the picture. Local circumstances still dictate choice. Trucks excel at short hauls and for off-the-beaten-path trips. The length of economical truck hauls seems to be shortening, rather than lengthening. Railroad loading systems are being improved through unitized loading systems and car modifications. "Piggybacks" are proving successful for lumber shipments direct to retailers.

Gluing Offers Increased Sales Potential

Small or medium sized sawmills can enter the gluing field, said Herbert B. McKean, director of research at Potlatch Forests, Inc., but two obvious initial steps must be taken:

- Learn what glued products can be manufactured and sold profitably, and,
- Determine if an adequate supply of suitable lumber is available to produce the products to be manufactured and sold. It is amazing how often the second requirement is overlooked, said Mr. McKean.

Cost of gluing will be higher than sawmilling. Product realization will be higher, too. Items that boost costs are drying, because stock must be brought to a lower moisture content, planing, because special or new sizes are involved, and quality control, because a bad glue line means a product failure.

Glued products are not only very stable physically, but also pricewise. Experience of many mills proves this. One particular example is a special panel that has been selling at the same price for five years while the lumber from which it is made has dropped as much as $20 a thousand in the same interval.

A lumberman can engage in gluing on a small scale with relatively small investment. However, if the investment is kept at a minimum, labor costs may be slightly higher.

Mr. McKean envisions concentration yards for gluing similar to the regular concentration yards so common in the southeast. The most important development in these yards would be development of glued components for housing and general construction.

Mr. McKean also believes some lumber items will disappear as gluing increases. At Potlatch, there is no longer any common 1x6 cedar. He says 9% of the lumber products shipped from Potlatch are glued.

Increasing component demand will provide impetus to the gluing industry. "Maybe in the future, we will see the sawmill gluing up sections 20, 30 or 40 feet long which will support the house from one corner post to the other, like a truss supports a bridge. Being made of glued lumber, it will be sufficiently flexible that the contractor can cut out his openings for doors and windows and within limits, such openings will not reduce the strength of the truss effect. End walls, partitions and roofs may all come in one piece, glued up at the sawmill and shipped to the building site.

Future Products, Processes

Slicing rather than sawing . . . methods to simplify bark-wood separation . . . less "start and stop" in the lumber manufacture flow were major suggestions of a 12-man panel in a 30-minute "brainstorming" session.

Other suggestions:

- Make transparent veneer to compete with plastic in patio covers, skylights, etc.
- Everybody copies lumber in building products so why not do the same and use 2x4 end trims for a product resembling bricks.
- Increase treatment of lumber; an immersion process exists which will secure the stability (to 1%) of the green dimension size.
- Filers when working saws instead of making clearance for kerf, should etch sides to improve resulting cut surface.
- Cut with items other than steel: sound, air electrons.
- Prestress glulams with wire mesh or cable to increase spans.
- More barking and chipping operation in the woods and pipe chips and chippable material out of the woods. Should work up to 50 miles.
- Smooth wood by squeezing instead of planing, using roller press with follow-up burnishing.

The panelists see definite possibilities for slicing. Actually, lumber up to one-half inch has been sliced successfully.

Easier bark-wood separation could be achieved either through genetics or technology. The researchers say technology. They would accept as an alternative a process for using a bark-chip mixture.

"Stop and start" manufacturing is being eliminated, but not fast enough."

Glued construction may help regain the market lost to concrete slab, Mr. McKean believes. "At least, we may be able to develop a block flooring of glued wood to be placed over the concrete. At best, an improved and as yet unconceived glued product design may provide a wood floor that will be inexpensive and generally more suitable than the slab." Research in this field is underway at Washington State University, Pullman, Wash.

In recent tests at the Western Pine Laboratory in Portland, Ore., finger-jointed 2x2s bonded with a resorcinol glue resulted in an average strength ratio of 75%, reported B. E. Welch, laboratory research engineer. Smaller finger tips would have resulted in an even higher value.

Resorcinol glue presents a problem due to its viscosity; thick glue does not squeeze out properly, glue too thin allows the joint to slip apart slightly when pressure is removed. A glue of little less than medium viscosity seems the best, Mr. Welch said.

Laminated beams offer a use of finger joints. Strength tests indicate that a finger joint can be designed for use in the top grades of laminated beams. Strength ratio needed for 2600 f Douglas fir beam is 80%. One laminator has experimented on finger joints with finger tip thickness from .010 inch to .030 inch and achieved a strength ratio exceeding 80%.

If an 80% finger joint was not possible, the outer ply could be scarf-jointed and the inter plys finger jointed.

Use of finger joints in dimension lumber such as joists and rafters will require careful control in manufacture, says Mr. Welch. Specifications covering the manufacturing technique, and a method of evaluating strength will likely be necessary.

Chemical Treatment Upgrades Lumber Products

Chemical treating of wood is developing new markets, and helping to keep the current ones for wood, according to Don Patterson, J. H. Baxter Co., Portland, Ore., who spoke as a representative of the Western Wood Preserving Operators Association.

A recent example is the pole-type structure which utilizes treated wood members. It is an economical structure, thus competitive. A 60x160-foot structure with a six-inch thick concrete floor and closed on three sides can be built for $1.70 per square foot.

Fire retarding treatment is the most exciting development. Treatment with a 15% flame spread rating (100% is the spread of fire in untreated red oak) is possible. Treatment endows wood with self extinguishing facilities. When the heat source is removed, the fire goes out. There is virtually no smoke.

The Uniform Building Code accepts fire retardant treatment in non-structural members. Numerous states and cities are recognizing it in their building codes.

It does have drawbacks. It is soluable in water so care is required in maintenance of building. Equipment used to machine treated lumber should have carbide-tipped cutting edges. In drying treated material 1 and 2 inches thick, sticker-marks remain and are nearly impossible to remove. However, where the surface is to be exposed, veneer can be applied for a desirable face and the flame spread rating is unchanged.

Treatment costs $80 to $90 per thousand for lumber and $80 to $100 per 1000 square feet for plywood.

Tips on Preventing, Fighting Plant Fires

Organization of a lumber plant fire protection system was outlined by Robert Olin, director of planning for Potlatch Forests, Inc., Lewiston, Ida.

Major points made by Mr. Olin.

Fire facilities inventory. Should be made by well qualified personnel and the result accurately charted, made into maps, or listed. Items include primary and secondary sources of water supply, maps of plant water distribution system, pump capacities, sprinkler systems, and fire truck and its equipment. Consideration should be given to auxiliary equipment that may serve two purposes, ie., the pond boat which could serve as a fire boat.

Man power. Certain production workers will serve in fire duties. Total

(Continued on page 82)

"THE CUSTOMER SPEAKS" panel, seated from left: H. S. Mersereau, Crossett Lumber Co., Crossett, Ark., and trade promotion chief of SPA; Homer H. Harris, Crawford Corp., Baton Rouge, La. Standing, left: P. D. Bretlinger, Pennsylvania Railroad, Philadelphia, Pa.; Wm. W. Richardson, Spartan Lumber & Hardware, Tulsa, Okla.; Seymour Auerbach, architect, Washington, D. C.; Dr. C. Harry Atkinson, editor PROTESTANT CHURCH BUILDINGS, New York City, N. Y.

Lumber Industry Must Supply What the Consumers Want

The general feeling that pervaded the Annual Meeting of the Southern Pine Association, held in New Orleans, La., April 4-6, was that we, as an industry, are on the threshold of great things. However, words of warning and caution were also given the more than 250 delegates attending the three-day convention. This was ably expressed by E. C. Gates, association president, when he said, "As an industry we are in a struggle to survive in the markets. If we in Southern Pine analyze the opportunities, we cannot help but feel a sense of greater security in the knowledge that we are part of a great national lumber industry that is also concerned with market opportunities in the '60's.

"A strong national lumber industry, with all of its regionals welded together by a common bond, can bring it back into its rightful place and thereby lighten the burden at the regional level and enable us to do a better job for Southern Pine. The big problem," Gates said, "is to reach those of similar beliefs and convince them of our same objectives."

Custombuilt, laminated wood arches and other building components superior in many ways to steel are giving a boost to the Southern pine industry. New developments in this type of construction were described by Max Hanisch, Jr., general manager of Unit Structures, Inc., Peshtigo, Wis., whose father introduced the German technique of glue "welding" slabs of kiln-dried lumber in U. S. in 1934.

"The future of our industry is just as promising as the future of our country," said T. J. McHugh, president of the National Lumber Manufacturers Association, keynote speaker. McHugh predicted a great future for the lumber and wood products industry despite new "miracle" materials appearing constantly on the market. Because of these competitive products, resourcefulness and ingenuity will be taxed to the utmost," McHugh said. He said that the industry seems about to settle its long standing controversy on moisture content. He called for strong leadership on the national, regional, and local levels, and said the industry is exhibiting greater unity.

An outline of the National Wood Promotion Program was presented by M. B. Doyle, executive vice-president National Lumber Manufacturers Association. Doyle said that the program was costing $1.3 million and was aimed at creating a more favorable attitude toward wood by the consumer.

Marketing opportunities for the 1960's were featured at a session devoted to SPA trade promotion. Presiding was H. S. Mersereau, Crossett, Ark., vice-president in charge of SPA trade promotion. He said the Southern Pine industry faced the "possibility of an overabundance of product and a corresponding decrease in markets" if lumber manufacturers do not "observe the signposts and raise their merchandising sights."

Mersereau cited U. S. Forest Service reports that there is 22% more growth in Southern Pine sawtimber than drain. "That 22% is likely to increase as good forest management continues to expand. To maintain stability, we must extend the area of acceptance of quality lumber."

Mersereau directed attention to the inroads of competitive materials on Southern Pine markets, stressed the continuing research of the competition, and mentioned new plastic products that posed a further threat to wood markets. He said that new research houses, using very little wood, were being hailed as the "Home of *Today*," not the Home of *Tomorrow*.

"Industry apathy toward the gradual strangulation of our markets" was scored by Mersereau, who urged a strong counter offensive, "reaching far beyond the realm of our immediate markets." He said that the industry is falling short in carrying the message of Southern Pine to the market and proposed a stepped up Trade Promotion program for the Association.

"The Customer Speaks" was a "super-seminar" on marketing oppor-

(Continued on page 80)

OUTGOING PRESIDENT E. C. Gates, left, hands gavel to new chief Philip E. Frankfort.

Saw Filer's Room

Two veteran filers offer suggestions on correct tooth spacing and tapering width on gang saws.

Correct Tooth Spacing Important

An old hand at filing, V. P. Holt, head filer at Ivory Pine Co., Dinuba, Calif., has done a lot of experimenting throughout his more than 30 years of keeping mills operating efficiently.

One of the common faults in sawing is the tendency of saws to rip out wood rather than to cut it out. This adds materially to operating costs. Mr. Holt has found that the tooth spacing has a direct relation to the speed of the band saw.

He runs his band mill at 9000 rpm, which he considers slow. He reduces the tooth spacing on saws from 2¼ to 2 inches and secures a smooth, straight, clean cutting saw and improved quality in lumber. Also, per-shift output is upped from 3000 to 5000 board feet.

Holt has found that 2¼-inch spacing is equally effective on wheel rim speeds of from 10,500 to 11,000 rpm.

Mr. Holt's filing practice is to keep the saws level and fittings tight. He grinds the wheels flat to provide good surface grip and to prevent side travel of the band. He uses six saws per year, usually two each of Hoe, Simonds and Atkins. He has equally good results with all.

Mr. Holt is pictured examining a band saw on his Armstrong filing equipment.

Tapers Width On Gang Saws

Head Filer J. V. Wheeler at Upper Fraser Spruce Mills, Ltd., Upper Fraser, B. C., has worked for numerous major mills on the west coast.

In sharpening gang saw blades, Mr. Wheeler tapers the width. For example, one saw he measured for THE LUMBERMAN came to 7 1/32 inches at the top and just under seven inches at the bottom.

Advantages of this taper, he says, are that when the gang saw moves up, the sawdust drops clear, and also that the saw can take a faster feed because it isn't running 100% against the wood.

Mr. Wheeler is pictured at work in his new all-Armstrong-equipped filing room.

New Handbook for Saw Filers

For the general benefit of the saw filing trade, the Armstrong Manufacturing Co. has just published a new book entitled "Saw Filer's Handbook." The new volume was written by Phil S. Quelch of Vancouver, British Columbia, Canada. Through his many years of experience in the trade, he is certainly well qualified to put this handbook of facts and techniques together.

The new book covers saw filings in general as well as specifically telling how to care for band saws, circular saws and gang saws. The care of the machines on which the saws operate has also been touched upon. Maintenance of stretcher rolls, band saw tensioning, band saw fitting, which entails swaging, shaping setting, gauging and sharpening are treated in detail. Mill alignment, carriage maintenance, lining resaws, wheel scrapers, and shear boards, water pipes and oil pads, are all mentioned.

Chapter and section headlines include "Tensioning and Leveling Circular Saws," "Lining Circular Mill," "Gang Saws," "Slasher Saws," "Automatic Trimmers," "Edgers" and others. A chapter on speed for edgers, circular saws and band saws and its relationship to the various tooth factors proves rather enlightening even to many of the old timers in the saw filing trade.

The book has been published by Armstrong Manufacturing company, Portland 8, Oregon, and may be obtained directly from them at $5 a copy.

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STOCKS	Paid 1959	This Month Bid	This Month Ask	Last Month Bid	Last Month Ask
Ambassador Oil, Com.	$ ——	3¾	4⅛	3⅛	3½
American Forest Products, Com.	1.00&S	33	35	33	34½
Anderson Tully Co., Capt. Stk.	20.00	310	OW	310	OW
Atlas Plywood, Com.	——	16	C	16⅜	C
Atlas Plywood, $1.25 Pfd.	——	28½	29½	28½	29½
Biles-Coleman Lbr. Co., Com.	*	19	OW	19¼	OW
Boise Cascade Corp. Com.	.60	43¼	45	43	45
George E. Breece Lbr. Units	.05	2½	OW	2½	OW
British Columbia Forest Prod., Com.	——	12¼	C	12½	C
Brooks-Scanlon, Inc. "A"	.80	19¼	OW	19½	OW
Brooks-Scanlon, Inc. "B"	.80	19¼	OW	19½	OW
Calaveras Land & Timber Co., Com.	2.00	27	29	27	OW
Calcasieu Paper Co., Com.	1.50	30	OW	30	OW
Cascades Plywood Corp., Com.	1.75	30½	32½	29¾	31¾
Central Coal & Coke Co., Com.	1.00	32	34½	33	35
Cherry River Boom & Lbr., Com.	——	40	OW	45	OW
Chicago Mill & Lbr. Co., Com.	1.25	23¼	25¼	23¼	25¼
Cloquet Lumber Co., Com.	*	1	OW	1	OW
Consolidated Naval Stores, Capt. Stk.	30.00	1050	OW	1000	OW
Container Corp, Com.	1.00	25⅜	C	26	C
Container Corp. 4% Pfd.	4.00	86	C	85	C
Crossett Company, Class "A"	.65	60	64	50	53
Crossett Company, Class "B"	.65	60	64	50	53
Crown Zellerbach, Com.	1.80	47	C	43¼	C
Crown Zellerbach, $4.20 Pfd.	4.20	90¼	C	89½	C
Curtis Companies, Com.	——	7¼	8¼	7½	8½
Dierks Forests, Inc., Com.	5.00&S	150	OW	150	OW
Evans Products, Com.	.50	14⅝	C	17⅜	C
First Lumber Corp., Com.	——	11½	12½	11	12
Fordyce Lumber Co., Capt. Stk.	1.50	55	OW	59	OW
General Plywood, Com.	——	12⅝	C	13½	C
Georgia-Pacific Co., Com.	.50&S	59⅜	C	53¼	C
Harbor Plywood, Com.	.40	21⅝	C	19	C
Edward Hines Lumber Co., Com.	2.50	38	41	38½	42
Insular Lumber Co., Com.	1.25	12	OW	12	OW
International Paper, Com.	3.00&S	102½	C	115	C
International Paper, $4 Pfd.	4.00	91	C	89	C
Keyes Fibre Co., Com.	1.20&S	14¾	15¾	14⅝	15⅝
Kirby Lumber Corp., Com.	2.00	47½	49½	47½	49½
Longview Fibre Co., Com.	3.50	87	90	91	94
Louisiana Central Oil & Gas, Com.	10.00	50	OW	50	OW
Louisiana Long Leaf Lumber Co.	5.00	152	OW	152	OW
Louisiana Sawmill Co. Com.	——	½	OW	½	OW
MacMillan, Bloedel and Powell River Co. Ltd.	1.40	14¾	C	15¼	C
McCloud River Lumber Co., Com.	4.00	125	135	115	OW
McCloud River Railroad, Com.	3.00	43	OW	42	OW
Meadow River Lumber Co., Com.	*	225	OW	225	OW
Medford Corp., Com.	11.00	255	270	250	260
Mississippi Land Co., Capt. Stk.	1.60	15	OW	15	OW
Northwest Paper Co., Com.	.15&S	31	34	33½	35
O. & N. Lumber Co., Capt. Stk.	2.00	42	OW	42	OW
Olin Oil & Gas, Com.	2½%S	16¼	17¼	17	19
Ozan Lumber Co., Com.	4.00	92½	OW	92½	OW
Pacific Lumber Co., Capt. Stk.	12.00	320	OW	315	330
Pine Tree Mfg. Co.	——	50	OW		
Pickering Lumber Co., Com.	.40	11	12	11¾	12¾
Pope & Talbot, Inc., Com.	1.25	31	33	34	36
Pope & Talbot, Inc., Pfd.	.30	4¾	5¼	4⅜	OW
Potlatch Forests, Com.	1.00	54	56	53½	56
Puget Sound Pulp & Tbr. Co., Com.	.80	23¾	C	24⅜	C
Richmond Cedar Works Mfg., Com.	——	½	1	½	1
Richmond Cedar Works, Com.	——	¾	1¼	¾	1¼
Ritter, W. M., Lumber Co., Com.	2.50	40½	OW	40½	OW
Roddis Plywood, Com.	.40&S	17¼	18¼	15½	16½
St. Regis Paper, Com.	1.40&S	41¼	C	42	C
Southern Minerals Corp., Inc., Com.	——	3¼	4½	4	5
Southwest Forest Indust. Inc., Com.	——	18½	20	19	OW
Tremont Lumber, Com.	2.00	OW	——	OW	
U. S. Plywood, Com.	2.25	47	C	45½	C
Union Lumber Co., Com.	1.40	59	62	57½	61
United States Lumber, Com.	.35	4¾	5¾	4⅝	5⅝
Upson Company, Com.	.40	11¼	12¼	11½	12½
Weyerhaeuser Co., Com.	1.10	36¾	38¾	37	
Winton Lumber Co., Com.	1.00	16	OW	16	OW
Wood Conversion Co., Com.	.45	11½	12½	12	13
Wooduse, Inc., Com. (Now Fersolin Corp. Com.)	——	¾	1¼	1	OW
BONDS					
Georgia-Pacific Corp. Subordinated Deb., 5s due 1976	——	86	89	86	89

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OW—Offerings Wanted C—Last Sale on Exchange where listed or bid

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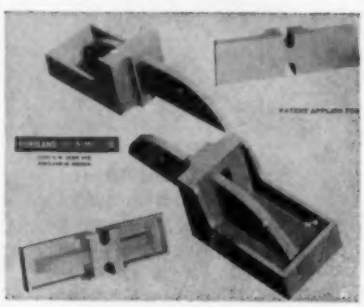

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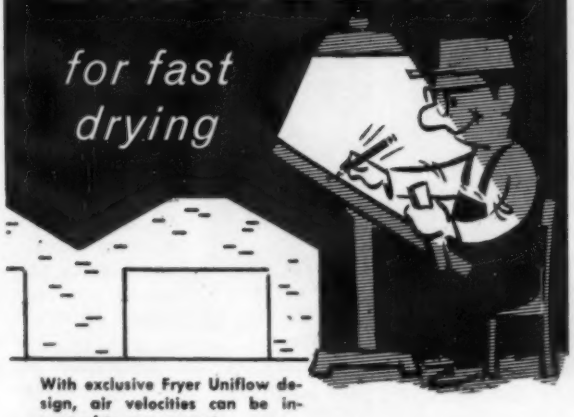

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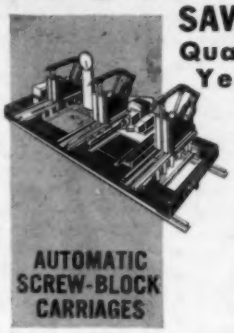

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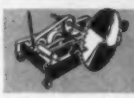

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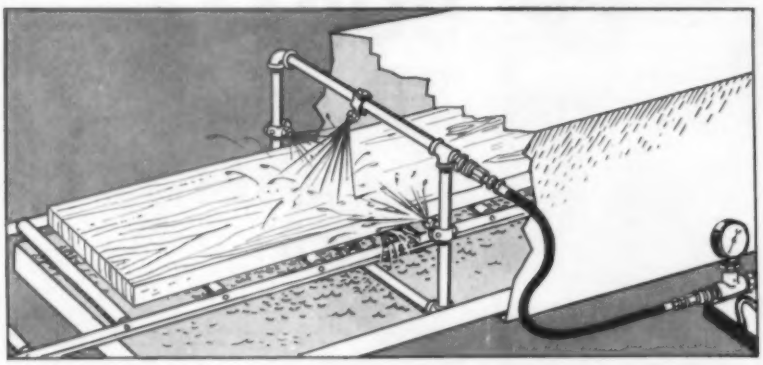
NOXIDE contains 5% Sodium Azide for control of brown stain in freshly sawn Western Pine lumber and 35% Sodium Pentachlorophenate technical to stop blue sap stain—plus other chemicals for more effective action.

NOXIDE can be mixed with cold or hot water—leaves lumber residue-free—completely safe when used as directed.

Can be used as a spray or dip—available in 10-lb. bags packed in fibre cartons.



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Philippine Producers Name New President

A. De Las Alas of Cantilan Lumber Co. is the new president of the Philippine Lumber Producers' Association. Other new officers include Carlos P. Fernandez, Nasipit Lumber Co., first vice-president; Gaudencio E. Antonino, Western Mindanao Lumber Co., second vice-president; Pacifico de Ocampo, secretary-treasurer.

A DE LAS ALAS

Directors of the association include Florencio Tamesis, Anakan Lumber Co.; Nicolas Capistrano, Jr., Misamis Lumber Co.; Jose G. Sanvictores, Aras-asn Timber Co.; P. M. Picornell, Bislig Bay Lumber Co.; Richard S. Kearns, Insular Lumber Co.; and Leonides S. Virata, Aguinaldo Development Corp.

•

$1 Million Montana Mill Under Construction

A sawmill cutting 80,000 feet a shift, operating on small logs is being constructed by Montana Forest Products, Inc., at Philipsburg, Mont. Principals are Duane Autzen, Portland Manufacturing Co., Portland; Al Hurl, Oregon Alder-Maple Co., Willamina, and Henry Buehner, Buehner Lumber, Tillamook, all of Oregon.

In addition to the sawmill, the project will include storage sheds, machine shop, dry kilns and a chipping plant. A 3000-foot spur line will be provided by Northern Pacific Railway.

Operation is due late this year.

•

Brown Plant to Produce Core Stock Material

New England hardwood logs will be used to provide core stock for two plywood subsidiaries of Brown Co. at North Stratford, N. H. The new facilities will peel hardwood logs from Brown's timber holdings in the area, and from woodlot owners. The plant is located adjacent to Granite State Veneer, Inc., and Plywood Products, Inc.

Brown formerly secured core material from the South, bringing in 30 carloads a month.

Other recent plant improvements include a large auxiliary boiler, a temperature and humidity-controlled warehouse for veneer storage, and installation of equipment for pre-finished and pre-sealing of plywood.

New Commercial Standard For Hardwood Plywood

A revised CS35, Commercial Standard Hardwood Plywood has been presented to the U. S. Department of Commerce, Commodity Standards division. Oscar Witt, chairman of the Hardwood Plywood Institute's technical committee says the standard would establish a basis of common understanding for all manufacturers of hardwood plywood and should facilitate procurement and use of the product. Users will be able to specify their needs from nationally recognized types and grades.

For the first time, particle board core and softwood core material have been written ino the standard. Softwood construction inner-plies are CS45 Douglas fir, CS122-56 western softwood plywood or CS157-56 pine plywood.

Grade descriptions for all species have been changed to conform with grade descriptions of the hardwood flush door industry and the Birch Club. The HPI, the hardwood flush door industry and Birch Club worked together to formulate the standard.

•

Roddis Plywood Adds To California Holdings

Willamette Sheathing Corp., Arcata, Calif., has been purchased by Roddis Plywood Corp., according to C. H. Blanchar, president of Roddis. The Willamette plant is located close to Roddis' fir-plywood plant and Timblend wood shavings board plant in Arcata. The Willamette plant has a capacity of four million square feet a month.

Mr. Blanchar says the newly acquired plant will provide Roddis with additional fir plywood production which it can effectively use, and also create a better balance of fir plywood production.

•

New Chief Engineer Named at Potlatch

William G. Edwards, formerly assistant engineer, lumber division, Potlatch Forest, Inc., has been named to succeed Robert T. Bowling as chief engineer. Mr. Bowling, known as the "father of the Pres-to-log" was chief engineer for the Clearwater Timber Co. at Lewiston, when it merged with the Edward Rutledge Timber Co., Coeur d'Alene, and the Potlatch Timber Co., Potlatch, in 1931 to form PFI.

Mr. Edward joined PFI in 1956. He formerly worked with Crown Zellerbach Corp. and Sansel Engineering.

WOOD PROMOTION POSTER developed by the B. C. Lumber Manufacturers Association, was shown at recent annual meeting in Vancouver. From left: L. R. Andrews, executive vice-president; T. E. Burgess, B. C. Forest Products, vice-president; J. S. Johannson, MacMillan, Bloedel & Powell River, Ltd., retiring president; J. V. Christensen, Tahsis Co., new president.

Portland Machinery Man Buys Downer Lumber Co.

Controlling interest in Downer Lumber Co., Livingston, Mont., has been purchased by H. C. Mason, head of several sawmill equipment firms in Portland, Ore., and associates. The transaction is estimated at $2.5 million.

Mr. Mason, who heads Medford Machinery Co., Fryer Dry Kiln Co., and Industrial Engineering and Contracting Co., all Portland, says the plant will continue to operate. He says the first improvement to be made will be a barker and chipper installation to utilize material now going to the burner.

He says establishment of a plywood plant is a future possibility. He sees an ample supply of Douglas fir and spruce to support a plant producing 36 million square feet a year. Establishment of a plywood plant would be dependent on securing control of sufficient timber.

•

Shingle Men Elect

Samuel J. Dumaresq, general manager, Acme Shingle & Lumber Co., Vancouver, B. C., has been elected president of the Consolidated Red Cedar Shingle Association of British Columbia, succeeding P. L. Whittall, assistant manager, Huntting-Merritt Shingle division, Canadian Forest Products. Arthur D. Botham is vice-president.

•

Zeagler Named V-P

Lee B. Zeagler, general manager of the Edens-Birch division of Southwest Forest Industries, Inc., in Corrigan, Tex., has been named a vice-president. He will continue in his present capacity with the Corrigan division. Mr. Zeagler became Edens-Birch manager in 1957. He was formerly assistant manager of the Southland Paper Mill's lumber division in Lufkin, Tex.

Plastic-Veneer Plant In New Ownership

Nu-Veneer Co. has been organized in Oregon to operate the plastic-over-veneer plant at McMinnville, which has been owned by Mrs. Eva Roseen since the death of her husband. Officers in the new firm include Hollis J. Nunneley, president; Robert J. Earl, secretary-treasurer; Francis R. Haenny, vice-president.

Product of the plant is called "Beautywood." It is produced from native Oregon woods as well as redwood and Philippine mahogany. Wood is sliced to a thickness of 10/1000 of an inch on a Lamb Greys Harbor slicer and dried in a continuous infra-red electric dryer.

After drying the veneer is matched and "booked" between sheets of polyvinyl plastics and stainless steel cauls. The "books" of six sheets are pressed in a specially built Fluckinger six-open press at pressure exceeding 1000 pounds per square inch and at 315 degrees. Press time is four minutes.

The company is revamping the plant for production of 3000 sheets per day and to permit production of sliced veneer for custom use.

•

B. C. Plywood Body Re-elects Humphreys

British Columbia's plywood producers are stepping up their promotional campaign designed to meet the growing threat to their traditional market by competitive materials.

Development of new uses for plywood, and research in the engineered components field are being expanded by the Plywood Manufacturers Association of B. C., according to Rex Humphreys, manager of the B. C. Forest Products plywood division in Victoria, who has been re-elected president of the association.

The ten-year-old organization's ten member companies produced a total of 1,119,000,000 square feet of plywood last year. This was slightly below the peak year of 1958, due mainly to the 10-day work stoppage last summer due to strikes.

H. A. Lester, timber-plywood division, Canadian Collieries Resources, Ltd., New Westminster, was re-elected vice president, and the board of directors consists of W. E. Burns, Canadian Forest Products; N. D. Cameron, Sooke Lake Lumber; J. S. Johannson, MacMillan, Bloedel & Powell River; R. C. McMillan, Canadian Western division Crown Zellerbach Canada; P. G. Frewerr, Richmond Plywood Corp.; H. B. Simpson, S. M. Simpson, and G. H. Tullidge, Western Plywood Co.

tunities at which "customer" spokesmen were the chief participants. The retail dealer was represented by Wm. W. Richardson, president, Spartan Lumber & Hardware Co., Tulsa, Okla., who advised that "the industry must establish policies of quality and distribution." He said that for the home builder "to be made to appreciate quality lumber, you must first create consumer demand. The builder uses what the consumer demands."

Manufactured Homes was represented by Homer H. Harris, vice-president of Crawford Corp., Baton Rouge, La. He said last year 12% of the total homes built were manufactured homes. He said that the market "may well reach 50% or even 70% of all new homes built by 1970."

Harris said, "We want three things:

- Lumber unitized by length and grade.
- Lumber dried to specifications.
- Grade marked.

Why not multiple stamping? We do not want it just on the end, Harris said. The end might be cut off, and we want it to show in construction. He said, "We will require house parts from the industry that require minimum working . . . we would also like bright lumber . . . and waxed ends on dimension."

P. D. Brentlinger, Philadelphia, Pa., official for the Pennsylvania Railroad, said that wood is still the favorite construction material with the railroads, especially now that it is not only preserved but made fire resistant. There are approximately 1¼ billion board feet in freight cars, which is constantly being repaired and replaced.

Brentlinger cited experiments with foreign woods and domestic hardwoods for car flooring and lining, and the use of prefabricated parts and substitute materials. The use of prestressed concrete railroad ties fall in the latter category. They cost almost twice as much as wood ties, but require only 2300 per mile instead of the usual 3300, and are expected to have longer life. (See THE LUMBERMAN, Significant News, April.)

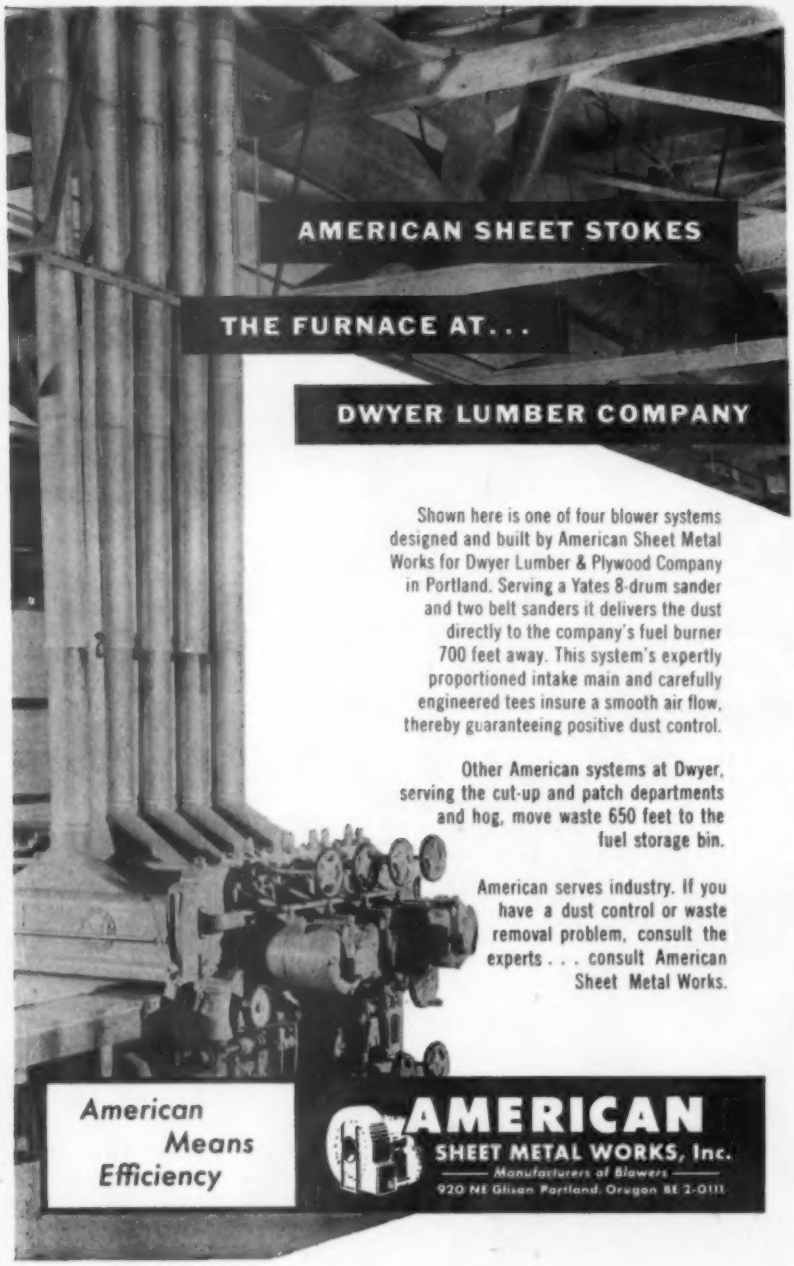
He said that the increased use of wheeled loaders plus bigger and heavier equipment demands more durable flooring in cars. He declared that the "product that gives the best service at the most economic installation will be used."

New Wood Uses. "We can no longer depend on negative design for economy," Architect Seymour Auerbach, Washington, D. C., told the convention. "We cannot go on eliminating this and that. An architect needs a wide pallet of materials with which to work," said Auerbach, an architect engaged in school designing. "The thing to do now is for the pine industry to expand its pallet to allow architects greater uses for wood," he asserted.

Along these lines, he said, the industry should make a restudy of sizes, standardize mill shapes, and foster research for making wood more adaptable to new construction systems. Auerbach also called for far-reaching studies for using wood chips, wood fibers, and other wood by-products for building uses.

Continual obsolescence was pointed out as a big factor in church construction by Dr. C. Harry Atkinson, editor, *Protestant Church Buildings*, New York City. Pointing out the remarkable growth in church building in recent years, Dr. Atkinson estimated this market to be $1.05 billion in 1960 . . . about $3 billion a year with affiliated buildings. He said we will need 90,000 new churches by 1975—plus furniture and other furnishings. He said 66% of existing churches are over 25 years old.

FHA Commissioner Julian H. Zimmerman, Washington, D. C., whose office approves 30% of the country's home loans, predicted that interest rates will be lower in the coming months. Zimmerman based his pre-


AMERICAN SHEET STOKES
THE FURNACE AT...
DWYER LUMBER COMPANY
Shown here is one of four blower systems designed and built by American Sheet Metal Works for Dwyer Lumber & Plywood Company in Portland. Serving a Yates 8-drum sander and two belt sanders it delivers the dust directly to the company's fuel burner 700 feet away. This system's expertly proportioned intake main and carefully engineered tees insure a smooth air flow, thereby guaranteeing positive dust control.
Other American systems at Dwyer, serving the cut-up and patch departments and hog, move waste 650 feet to the fuel storage bin.
American serves industry. If you have a dust control or waste removal problem, consult the experts . . . consult American Sheet Metal Works.
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diction on less borrowing by the federal government from private business sources.

Grade Marking. Speaking on the new grade-marking of lumber requirement which went into effect across the nation April 1st, Zimmerman said, "If the new law works a hardship in certain instances at first, we will be understanding and tolerant." The action had to be taken, Zimmerman said, because there had been "considerable abuses all over the country" as to the grade of lumber used in homes.

In a nationwide sense, this is a new program, Zimmerman pointed out, but it is not new in limited practice. During the past 14 years the grade marketing of lumber requirement has been imposed in areas served by 12 of FHA's 75 insuring offices.

"The grade marking experience was so successful," Zimmerman said, "and accomplished so much toward providing the home buyer with the quality materials represented to him by the builder that it was the framework for the present regulation. The net result of this program will be, I think, increased confidence by the home buyer in FHA-insured homes and in the home building industry. The fact that we are the best housed people in the world is largely due to the lumbermen."

Dallas economist and banker, Dr. Arthur A. Smith, described congressional proposals to increase the minimum wage as "one more step in the direction the enemies of this country would like to see us go." Dr. Smith said the setting of minimum wages by federal law "in substance promotes unemployment and pauperizing of many workers."

The association's Industry Commission went on record as opposing the minimum wage increase by Wage & Hour Law.

Next year's convention, to be held in New Orleans, April 7-9, will include the 6th SPA Machinery and Equipment Exposition. More than 98% of the 1959 exhibitors and many new companies plan to participate.

New officers are: President, Philip E. Frankfort, Union Bag-Camp Paper Corp., Franklin, Va.; chairman of the board, E. C. Gates, Fordyce Lumber Co., Fordyce, Ark.; first vice-president, A. T. Hunt, Hunt Lumber Co., Ruston, La.; second vice-president, W. Scott Shepherd, Lumber River Mfg. Co., Lumberton, N. C.; vice-president for trade promotion, H. S. Mersereau, Crossett Lumber Co., Crossett, Ark.; treasurer, M. L. Fleishel, Jacksonville, Fla.; executive vice-president, Stanley P. Deas, New Orleans, La. ■■

WIDE BAND SAW WELD CRACKING ELIMINATED WITH DISSTON HELIARC WELD

"It's the toughest weld we've seen! We've run some of these Disston saws with Heliarc welds over 1000 hours with no sign of cracking. Heliarc means extra profit for us."—R. T. Davis, Gen. Mgr., Engineering & Operations, Corbett Lumber Company, Wilmington, N. C.

And acclaim continues to pour in . . .

"Disston Heliarc weld has licked our saw breakage problems."—A. M. Flowers, Gen. Mgr., Marsh Plywood Corp., Pamlico, S. C.

"Cracking at the weld has been eliminated with Disston's new wide band saw."—Herman Allen, Supt., Polkton Lumber Co., Troy, N. C.

"Disston's Heliarc weld is tops!"—Scott Louder, Filer, Tilghman Lumber Co., Sellers, S. C.

"Disston Heliarc is the answer to weld breaking problems!"—J. H. Brown, Gen. Mgr., Russellville Lumber Co., Russellville, S. C.

Disston guarantees that a Heliarc weld is as strong as any part of the saw! See your Distributor or write: *Disston Division, H. K. Porter Company, Inc., Philadelphia 35, Pa.*

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authority on a fire rests with the fire chief. He also has the responsibility for supervision of equipment maintenance, scheduling fire prevention inspection and training of subordinates. Fire brigades should be organized in every plant, with the number determined by the plant size. Two types of brigades are suggested: one from men working on shifts and the other from men not working but available for call.

Communications systems must be rapid and sure of actuation, have a medium of transmission, and personnel to receive the alarm who will and can do something about it. Every primary alarm system should have an alternate, for all mechanical devices are subject to failure.

Telephone can be used. Now available is a system in which one dialed number will actuate a central station-switching device to call 20 or more pre-designated parties simultaneously, repeating a recorded or oral alarm. Mobile two-way radio systems also serve well.

Fire prevention is of equal importance to fire control. Superior fire prevention programs may be less costly than the investment in apparatus and manpower to control fire.

"Lumber plants and their frequent disastrous fires have focused public attention not only on our disasters, but upon the very nature of the product we sell. These fires speak in derogatory terms of our product—lumber—oftentimes without any good justification except the carelessness of lumber plants and yards in their fire prevention programs. If we as an industry are going to promote our wood products in the public eye, we are going to be compelled to practice what we preach by building our plants of lumber and preventing their destruction by fire.

Management must have an understanding of the problems relative to maintaining an atmosphere of fire consciousness if such understanding is to exist among employes, said Lyle Goodrich, supervisor of the fire training program, state board of vocational education in Washington.

Fire program items on which management must be informed include:

- Built-in fire protection, such as sprinklers, standpipes, hydrant systems.
- Deluge sets, hose houses and many other protection devices that use an extinguishing operation.
- Fire extinguishers.
- Flammable liquids.
- Alarm systems.
- Radio procedure.
- New products for plant protection.

Better cooperation between management and workers can be secured by monthly meetings of management and personnel, a news letter and through a fire safety committee that would operate much as a plant safety committee does.

Fire first aid is the immediate application of fire extinguishment in the first few seconds of a fire, according to Cully Bing, fire chief, Clearwater unit, Potlatch Forests, Inc., Lewiston, Ida. To make this first aid successful, personnel should understand the types of fires which occur and the type of fire extinguishers best suited to their control.

Type fires are:

Class A involves ordinary combustibles such as wood, paper, rubbish and textiles. Water is most effective in reducing the temperature below the ignition temperatures.

Class B involves flammable petroleum products or other flammable liquids, greases, etc. Blanketing or smothering is most effective.

Class C involves electrical equipment where the extinguishing agent must be non-conductive. Remove the electricity and the fire becomes A or B.

Most effective extinguishers for the type fires are:

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Make the world's finest flakeboard from your scraps. Sell Bison Board in a ready market, or use it in your products — we can show you many advantageous uses. The Bison System offers you proven performance, semi-automatic operation, low production cost and highest quality product *with production guaranteed.* It is the only system that can produce high-quality flakeboard with 3500 M.O.R. when using 75 per cent shavings.

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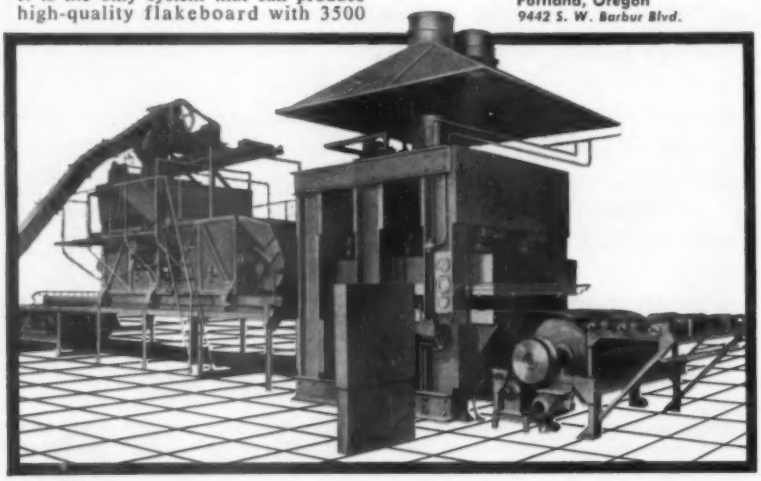


A—Soda acid or water extinguishers because of cooling action, or foam extinguishers for smothering and cooling effect.

B—Foam extinguishers, liquid carbon dioxide or carbon tetrachloride extinguishers for cooling and smothering effect, and dry chemical extinguishers for smothering.

C—Liquid carbon dioxide, carbon tetrachloride and cooling and smothering, and dry chemical for smothering.

Paint Developments

The best paint combination to prevent moisture blistering appears to be a combination using a primer formulated to provide maximum level of adhesion and a topcoat to provide permeability as well as appearance and appearance retention properties, according to C. W. Shay, E. I. Du Pont. Mr. Shay's report was presented by Frank J. Falk, field representative for Du Pont in Spokane.

Primer composition is usually of the alkyd resin type exhibiting a high level of penetration. This level of penetration is obtained by using solution-type materials as opposed to emulsion types. Topcoat of the blister resistant system is a pigmented latex emulsion. The present preference appears to be for the acrylic latex emulsions.

Inland Fir Stresses

Working stresses for Inland Douglas fir is a hot topic. At the present time its stress span table equals west side Douglas fir, except for trusses and heavy construction. However, new stress grades must be established by January 1 and the Inland Douglas fir people are fretful that they will be lower than those of the west side.

George Hjort, Boise Cascade Corp., Boise, Ida., said the Western Pine Association, Washington State University and the research center at Oregon State College have undertaken studies to establish stress grade recommendations. The groups will start gathering specimens shortly. They will come from the green chain and will be long lengths.

Inland Douglas fir has performed well in the past, Mr. Hjort said. He pointed out that both west and east side Douglas fir in British Columbia, just a few miles north, are rated equal.

Mr. Hjort believes that establishing stress grades for Inland Douglas fir equal to west side will be a key move in simplifying grades . . . one span table for all the uniform grades.

If Inland species does not get an equal rating, producers will lose $10 a thousand on sales and the importance of the species in the area will be affected.

Plywood is also affected. A new commercial standard requires a 1/32-inch increase in nominal thickness and a minimum of ⅛-inch face stock for Inland Douglas fir plywood.

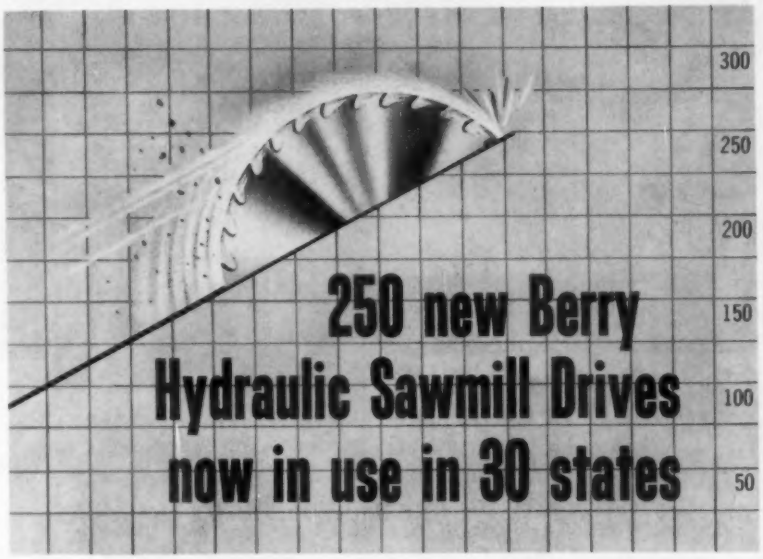
Wood in Wind

Better fasteners are necessary in wood structures that will be subjected to high velocity winds. A wind storm last fall in Ogden, Utah, proves that, E. S. Kotok, chief, U. S. Forest Utilization Service in Ogden, reports. The wind blew roof sections off homes, in some cases allowing walls to rack, and literally destroyed some homes.

Yet wood did not fail. Some sections transported up to 200 feet by the gale were still intact. Nailing was not adequate, though most of it met code requirements. Steel tie straps augmenting nailing will substantially lessen the damage that can result from high winds.

Mr. Kotok observed following the storm that wood shingles suffered little or no damage. Shakes did nearly

(Continued on next page)



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*Company*_____

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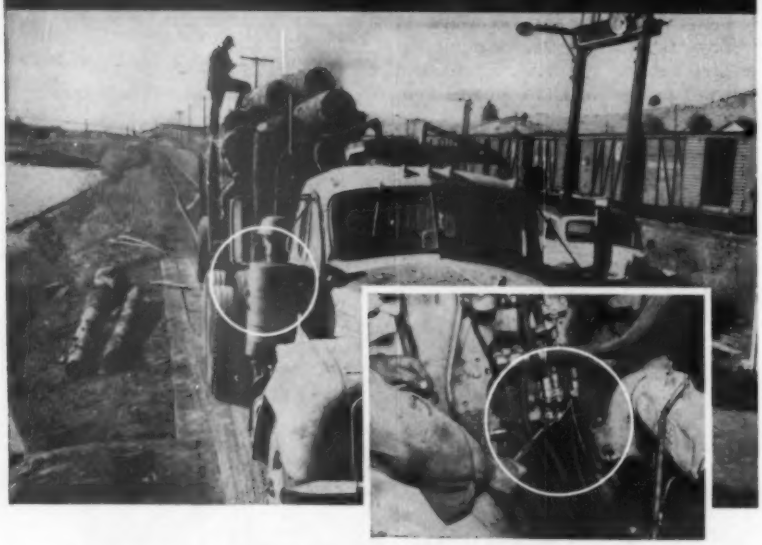
Aeroquip Hoselines keep logging equipment

Working around the Clock

Ned Putnam, Klamath Falls, Oregon, reports results he gets by replacing exclusively with

Aeroquip *Hose and Reusable Fittings*



Here's proof of Aeroquip performance on the roughest of jobs . . . hauling logs on a punishing day-and-night schedule . . . in Oregon's mountains year-round through rain and snow . . . with roads or without roads.

Ned Putnam Logging, one of the largest logging-out contractors in the northwest has found it's economical to use Aeroquip Hose and Reusable Fittings on his 43 trucks, 20 tractors, 5 shovels and other equipment. In the shop or on the job, all you need is a few feet of hose and a handful of fittings. No special tools are required. And the replacement lasts through weather, heat, pressure and murderous vibration in even the most rugged service.

There are many reports like this in our file to show you're in good hands when you consult with Aeroquip. The complete line of Aeroquip products to fit your needs is detailed in Catalog 204. Your Aeroquip distributor, a fluid line specialist, will give you a copy. He'll discuss without obligation, various applications that might be helpful to you. His number is in the "Yellow Pages" under "Hose."

STANDARDIZE ON Aeroquip

Aeroquip is so easy to use—inventory's just a few feet of hose and a handful of fittings.

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AEROQUIP NORTHWEST WAREHOUSE, 635 N.W. 16TH AVE., PORTLAND, ORE.

AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN CANADA, U.S.A. AND ABROAD

as well. Gravel and asphalt shingles peeled off in big pieces and tile roof fared poorly.

From an aerodynamic standpoint, certain house elements tend to develop negative pressures, or lift. The most critical angle of approach to frontal winds is about 20 degrees—a common pitch for residential roof. Actually, a well tied together house, not well anchored, could fly.

2-Way Radio Potential

Two-way radio offers its greatest day-to-day cost saving and efficiency when used in plant transportation: on straddle carriers, fork lifts and other material handling truck units. More material can be moved at less cost, says D. N. Corbin, General Electric Co. in Spokane, Wash.

Material is routed just where and when it is needed. Emergency material orders can be supplied to the processing department quickly without wasted time.

Scott Paper Co. planned a fleet of 12 lift trucks in its three-floor Everett, Wash., paper warehouse. With radio, nine were enough. This is a common ratio in materials handling operations, Mr. Corbin said. Three radio equipped trucks can do the work of four without radio.

Radio also speeds up and makes more accurate the operation of overhead cranes and conveyors. Voice direction is better than hand signals in this operation.

Transistor radio has made possible personal communication, Des Johnson, Motorola, Inc., Spokane, Wash., reported. Mr. Johnson agreed with Mr. Corbin on the ideal application in handling equipment.

"Let's imagine the ideal plant and operation . . . one in which all key and supervisory personnel may be contacted instantly by radio communications . . . one in which all plant vehicles and materials handling equipment may be instantly dispatched by radio. Add to this instantaneous control of all mobile phases of the operation . . . complete selective calling. By this I mean the ability to call anyone or unit, individually, without others hearing the call or being disturbed in their duties.

"Further use of transistors has made such a complete means of control of an operation possible."

Mr. Johnson said it is possible to license paging and communication systems in the Manufacturers Radio Service, Business Radio Service or in the Forest Products Radio Service in conjunction with an existing radio communication system. Operation in Manufacturers Radio is advisable.

SUPERIOR DRYING — THE KEY TO GREATER PROFITS!

In one way or the other, just about everybody makes use of veneer — in home construction, in furniture, in boatbuilding and in countless other products which make our lives fuller and more comfortable. For the plywood manufacturer, it is important that the veneer glued into his plywood is dried just right — *uniformly* — for its end use, and MOORE ROLLER VENEER DRYERS offer the *key* to "just right" drying for any mill.

MOORE also manufactures
- Softboard Dryers
- Gypsum Dryers
- Hardboard Heat Treating & Humidifying Equipment

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MOORE DRY KILN COMPANY

JACKSONVILLE FLORIDA | BRAMPTON ONTARIO | VANCOUVER BRITISH COLUMBIA | NORTH PORTLAND OREGON

World's Largest Manufacturers of Drying and Handling Systems for Lumber and Veneer

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Assure an adequate log supply for a continuous mill operation

The Lawrence way enables you to use your inventory of logs—and lumber too—as collateral for a secured loan. Why not call the nearest Lawrence man for further details on how he can help you.

LAWRENCE ON WAREHOUSE RECEIPTS ... IS LIKE CERTIFIED ON CHECKS

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75 hp
for boating's toughest jobs

The Evinrude **Starflite III**! Mighty power for a wide range of waterfront duties and commercial boating jobs. Smooth, quiet, tireless performer. Its V-4, 89 cu. in. engine develops 75 hp at 4500 rpm. You get outboarding's finest features: electric starting, automatic choke, sea-going magneto ignition, rugged Jetstream Drive, two-way shock absorbers. **Lowest cost per hp in history!**

Evinrude Motors, 4143 N. 27th St., Milwaukee 16, Wis.
A Division of Outboard Marine Corporation
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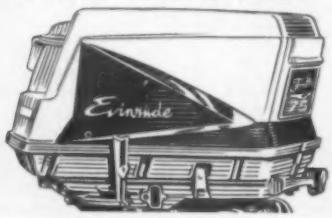
EVINRUDE
FIRST IN OUTBOARDS



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Every time!

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- Used by U. S. Forest Service
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Inject herbicide into inner bark of tree . . . prevent re-sprouting. Save any trees you select. Only $8.00 per acre to kill heavy timber and brush. No drift. No danger to livestock or crops. Inject anytime. Weighs only 11 lbs. Simple to use. 2,586 injectors used by U. S. Forest Service. Other buyers include Dierks Forests, Inc., Crossett Lumber Co., International Paper Co. List of ranchers on request. Send for FREE booklet or order now. NOW ONLY $40

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"WOOD IS WONDERFUL" campaign receives boost from Corley Manufacturing Co. Here, vice-president Hal Redwine displays some of the material used by the firm in the program.

Corley Helps Wood Promotion With Money, Ads and Acts

Corley Manufacturing Co., Chattanooga, Tenn., was the first forest products industry supplier to make a contribution to the National Wood Promotion Program. The sawmill machinery manufacturer didn't even wait for a solicitation.

The Tennessee firm makes its contribution on a continuing basis and by a set plan. Money is paid to NWPP each time a major equipment sale is made. It is estimated that the first year's contributions will total about $5000.

Some phases of Corley's program:

Advertising. The phrase "Let's Tell the World—Wood Is Wonderful" appears on all Corley 4-color ads used in periodicals and direct mail.

Stationery. All Corley letterheads and envelopes carry the phrase "Wood Is Wonderful."

Interior B. C. Sawmills Pool Resources for More Efficiency

Significant of the rising importance of the lumber industry in interior British Columbia is the alliance of ten sawmills, one planing mill and several holding companies which have pooled their resources with a view to achieving greater efficiency in operation, fuller utilization of raw material and more aggressive marketing, particularly in the U. S. market.

The individual mills will be operated under the control and management of Midway Terminals, Ltd., a Vancouver-based organization which was formed a couple of years ago to acquire properties in the Fort William area of western Ontario, the big sawmill of Great Lakes Lumber Co. having been purchased last year. The company also bought out Sinclair Spruce Co. and John Luttin Ltd., at Keremeos.

Other companies involved in the recent consolidation are: Osoyoos Sawmills, Summerland Box Co., Oliver Sawmills, Tulameen Forest Products, Brookmire Logging Co., Transit Planing Mills, National Forest Products, Interior Management Services, O & D Holdings, S & D Holdings, S & B Holdings. These operations extend from the Prince George area almost to the U. S. boundary.

Harold Hemsworth and George Richardson were the key men in Midway Terminals during the period of negotiation. Directors include M. E. Davis, P. O'Brien, H. S. Berryman, Maurice Dix, G. Richardson, L. D. Cahoon, John Luttin. General manager is Ed McDonald, who formerly was an executive with MacMillan & Bloedel's Canadian white pine division.

Purchase orders. Not only do purchase order forms carry the phrase "Wood Is Wonderful," but orders are accompanied by a card explaining that the supplier can indirectly patronize Corley by specifying wood at every opportunity. A coupon on the card offers to send the NLMA's booklet "Livability Unlimited." Many of the booklets have been sent out by Corley.

Corley employee cooperation. An educational campaign is being carried on to acquaint Corley employees with the many advantages of wood. They are urged to pass this information on to their friends. The employees are told how a broader use of wood can stabilize the lumber industry and how this stabilization can afford them better security.

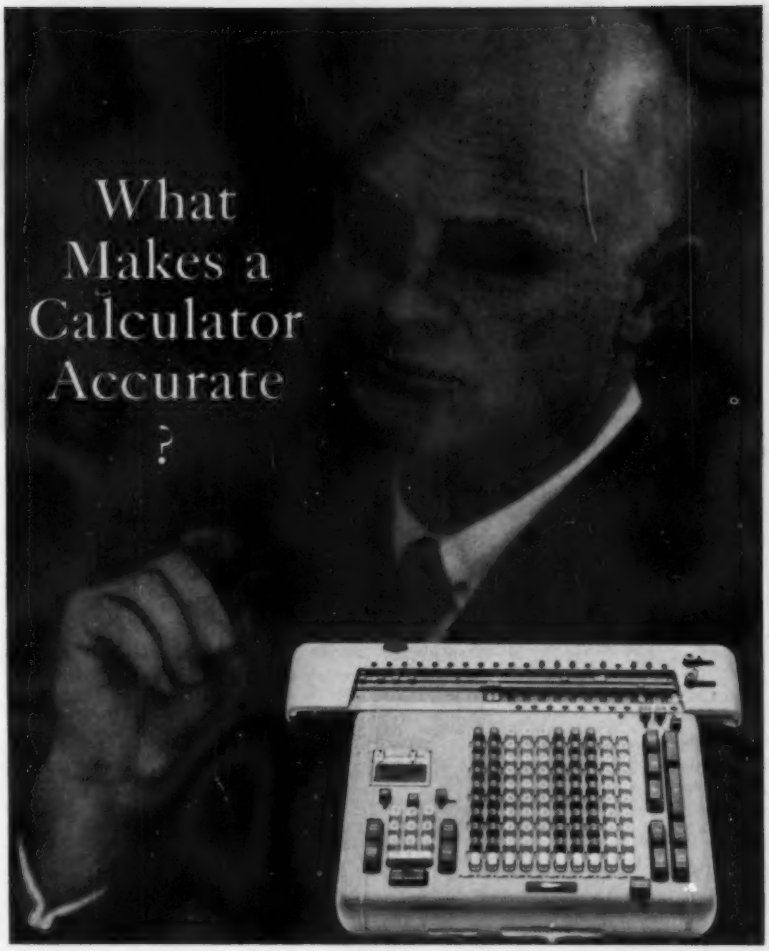
Speeches. Corley officials and employees make many speeches on the subject of wood and its advantages. These are delivered before civic clubs, church groups and other organizations. Ernest Clevenger, Corley vice-president, has spearheaded this phase of the campaign.

Hal Redwine, vice-president of Corley, explains the company's stand. "There are literally thousands of concerns whose prosperity—or lack of it—depends directly or indirectly on the sale of wood products. Each of us should encourage and help broaden the scope of NWPP activities. ■■

Probably the best known figure in the company is Mr. Berryman, who resigned as president of MacMillan & Bloedel because of ill health three years ago. Robert W. Porter is president of Midway Terminals, and Mr. Berryman a vice president. Mr. Dix, board chairman, was formerly active in the wholesale and retail lumber field in Vancouver and Toronto, where until recently he was head of Inter-Provincial Building Credits, primarily interested in financing construction of wooden houses and other structures in eastern Canada.

Two farm licenses held by the group cover approximately one billion feet of standing timber, mostly spruce and fir. The combined capacity of the mills now associated under one banner is estimated at 60,000,000 board feet annually.

Midway Terminals is issuing 1,500,000 shares to effect the take-over, and negotiations have been under way in New York and eastern Canada to complete necessary financing. ■■



We're proud of the mechanical accuracy of the Friden fully automatic calculator. *But neither it nor any other calculator can get a right answer from a wrong entry.*

The calculator that allows the smallest margin for operator error will actually prove to be the most accurate.

The Friden SBT requires fewer manual keystrokes, fewer operator decisions than any other calculator on the market.* *In terms of day-to-day output, this makes it the most accurate calculator you can buy.*

For a no-obligation, ten-minute demonstration of "The Thinking Machine of American Business," call your Friden man or write: Friden, Inc., San Leandro, California.

**This is PRACTIMATION: automation so hand-in-hand with practicality there can be no other word for it.*

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LUMBER PRICES

Douglas Fir

1x8	Utility S4S KD	$ 52- 57.00
2x4	Construction Dimension S4S KD	85- 87.00
1x4	C&Br VG Flooring KD	180-185.00
1x6	C&Br Drop Siding KD	155-160.00
1x6	C&Br S4S KD	170-175.00
1x8	C&Br S4S KD	170-175.00
1x10	C&Br S4S KD	175-180.00
1x12	C&Br S4S KD	215-229.00

Construction Timbers and Plank

3x12	6-20 feet	$ 95- 98.00
3x12	22-24 feet	100-103.00
3x12	26-32 feet	108-113.00
4x4	8-20 feet	96- 99.00
4x4	22-24 feet	101-104.00
4x4	26-32 feet	110-115.00
6x6	8-20 feet	95- 98.00
6x6	22-30 feet	102-105.00
6x6	32-40 feet	117-120.00
8x8	8-20 feet	94- 97.00
8x8	22-30 feet	99-102.00
8x8	32-40 feet	114-117.00
6x6, 8x10, 10x10, 12x12	8-20'	$92- 95.00
6x10, 8x10, 10x10, 12x12	22-30'	97-100.00
6x10, 8x10, 10x10, 12x12	32-40'	112-115.00

Construction Dimension (Green)

2x4	6-24 feet	$ 77- 79.00
2x6	6-24 feet	77- 79.00
2x8	6-24 feet	77- 79.00
2x12	6-20 feet	78- 80.00

Standard & Btr. Boards (Green)

1x4	6-20 feet	$ 57- 60.00
1x8	6-20 feet	68- 71.00
1x12	6-20 feet	66- 69.00

Douglas Fir Plywood

¼-inch AD S01S	$ 64- 68.00

Southern Pine (KD Stock)

Vertical Grain Flooring

	BB	C	D
1x4	$225.00	$215.00	$155.00

Flat Grain Flooring

1x4	165.00	157.00	140.00
1x6	197.00	177.00	135.00

Drop Siding

1x6 No. 106	197.00	184.00	137.00
1x6 No. 116	197.00	184.00	137.00

Boards and Shiplap

	1x6	1x8	1x10	1x12
No. 1	$129.00	$130.00	$127.00	$175.00
No. 2	82.00	85.00	84.00	95.00
No. 3	69.00	76.00	71.00	71.00

No. 1 Dimension

	12	14	16	18	20
2x4	$105.00	105.00	105.00	119.00	119.00
2x6	101.00	101.00	100.00	116.00	116.00
2x8	100.00	100.00	100.00	115.00	115.00
2x10	112.00	110.00	109.00	125.00	125.00
2x12	115.00	112.00	112.00	125.00	130.00

No. 2 Dimension

	12	14	16	18	20
2x4	$ 99.00	99.00	99.00	115.00	115.00
2x6	89.00	89.00	88.00	111.00	111.00
2x8	88.00	88.00	85.00	105.00	105.00
2x10	93.00	94.00	90.00	108.00	108.00
2x12	94.00	93.00	93.00	115.00	120.00

Western Pine

Ponderosa Pine

Selects S2 or 4S	4/4 RW	5/4 RW	6/4 RW
C Select RL	$256.93	$264.24	$262.56
D Select RL	165.00	191.46	184.81

Shop S2S	No. 1	No. 2
5/4	$144.63	$113.13
6/4	143.52	113.28

Commons S2 or 4S	No. 2	No. 3
1x8" RL	$ 92.03	$ 72.51
1x12" RL	103.52	78.42
4/4 No. 4 Common S2 or 4S		$ 61.29

Idaho White Pine

Select S2 or 4S	4/4 RW	6/4 RW
Choice (C) RL	$266.58	$296.00
Quality (D) RL	172.91	239.63

Commons S2 or 4S	Col. (1)	Ster. (2)	Std. (3)
1x8" RL		$111.35	$ 80.73
1x12" RL		138.64	88.13

Sugar Pine

Select S2 or 4S	4/4 RW	5/4 RW	6/4 RW
No. 1 & 2 Clear RL	$273.32	$277.53	$281.77
C Select RL	268.50	268.29	268.33
D Select RL	186.07	202.65	198.60

Shop S2S	No. 1	No. 2	No. 3
5/4	$151.69	$115.40	$ 83.95
6/4	146.45	114.14	83.67
8/4	166.24	125.58	85.09

Larch-Douglas Fir

4/4 No. 3 Common S2 or 4S	$ 74.80
2x4 No. 1 Dimension RW&L	81.59
2x4 No. 2&Btr. Dimension RW&L	74.43

•

Idapine Mill Sold

Idapine Mills, Inc., Grangeville, Ida., has been sold to group headed by Henry A. Kuckenberg, contractor of Portland, Ore., Dr. Marvin E. Speer, Leavenworth, Wash., and John T. Casey, Portland, who is president of Sierra Mountain Mills and M. Odin Mills, Ltd.

Mr. Casey will serve as managing director of the newly acquired operation which comprises four sawmills cutting about 40 billion feet a day.

CLAYTON "STEAM ON DEMAND"
SPEEDS PLYWOOD PRODUCTION

The Clayton steam generator maintains constant uniform press temperature throughout curing cycle. Gives instant response to load demand — with no platen temperature fluctuations, no time loss for temperature recovery. "Steam on demand" means faster production, fewer rejects. For details, write to:

Clayton MANUFACTURING COMPANY
CL 135 461 N. Temple City Boulevard, El Monte, California

Supplied, Engineered, Installed and Serviced in the Pacific Northwest by A. W. Mortenson Company • Portland: 1117 S. E. Morrison, BE 5-3165 • Seattle Office: 1016 First Ave. S., MAin 3-5006.

HEIL Dryers help boost sales 16%

Management at Pope & Talbot's new particle board plant at Oakridge, Oregon, attributes a 16% sales increase to better utilization of wood residue.

Two HEIL Dryers are used. The small dryer at left reduces moisture content of Douglas fir flakes to about 6%. The larger dryer handles planer shavings.

One shift currently produces 350,000 sq ft of ¾-inch particle board, flakeboard and mixed particle-flakeboard. Building trades use the particle board for floor underlayment and core stock. Flakeboard goes into table tops, desks, counters, store fixtures.

Fast, uniform drying of wood products

Wood chips, flakes, shavings or sawdust can be dried *uniformly* in a matter of seconds by a HEIL dryer — then pressed into high-quality board . . . or other products.

Exclusive 3-pass drum provides 3-stage drying in a single, compact unit. Compound showering flights on drying drums eliminate surging . . . keep particles flowing.

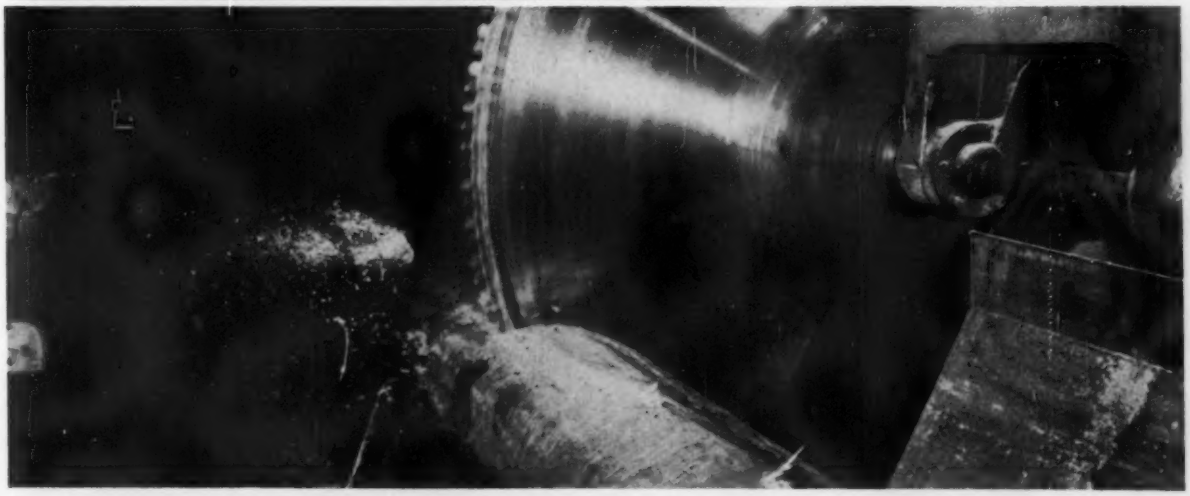
Wood by-products are carried on a stream of hot air. Light particles dry quickly and are whisked away. Heavier particles move more slowly. All emerge uniformly dry.

Write, wire or call for further information

The Arnold Dryer Co., subsidiary of

THE HEIL CO.

3000 W. Montana Street • Milwaukee 1, Wisconsin



BOTTLENECK?

Have you found that with modern "speed-ups" your sawmill deck is holding up profit-making production? Many mills faced with this problem have switched to SPEAR & JACKSON "IT*" Saws. Engineered expressly for fast, clean cutting and made from alloy steels incorporating the new "Matthew" temper, they are a must for any efficient operation.

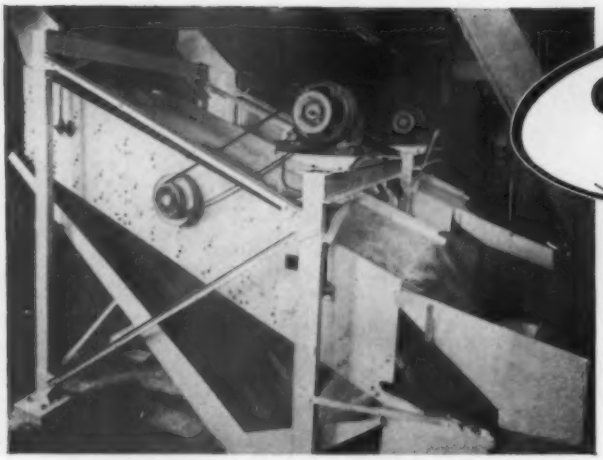
SPEAR & JACKSON

"The Saw Without a Flaw"

Eugene, Ore., U.S.A.

* *Inserted Tooth*

50-123A



Carthage-Dillon Chip Screens

Full-Floating, Circle-Throw Vibrating Type

•

Complete with woven-wire steel screens of suitable mesh, suspension frame with legs for floor mounting, feed tray, V-belt drive and motor base frame. Also furnished with suspension rods, springs, and brackets arranged for overhead installation.

It will pay you to take advantage of the unique combination of features offered by the Carthage-Dillon chip screen – high capacity, high efficiency, low cost of installation, power and maintenance. There is a complete range of sizes, backed by expert engineering service.

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MACHINE COMPANY
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3224 N. Fulton Ave.
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REdfield 4-5991

Ray Smythe Co.
511 Park Bldg.
Portland, Ore.
CApitol 3-0502

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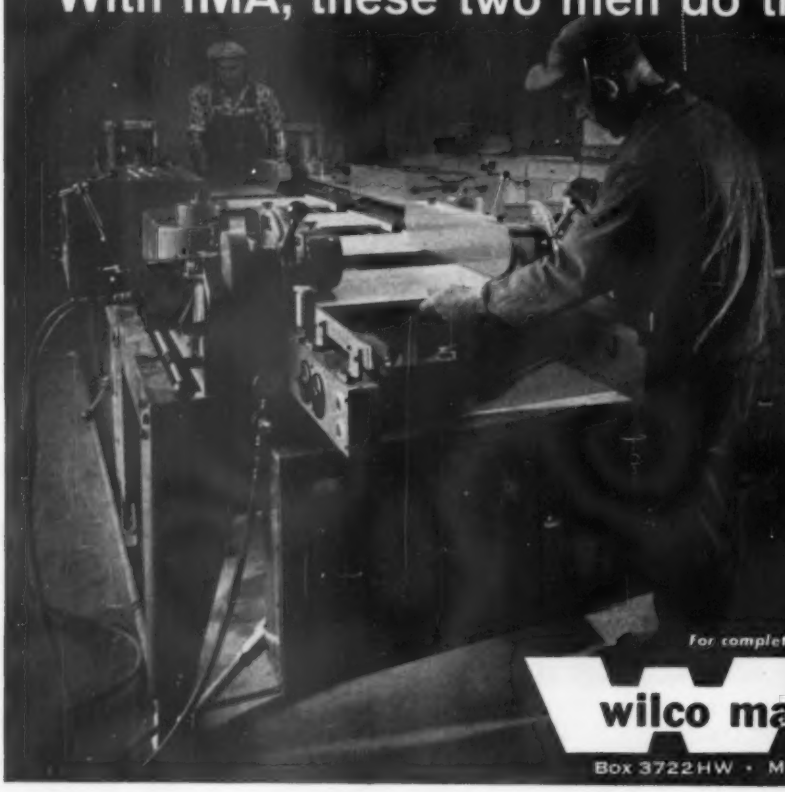
"With IMA, these two men do the work of ten"



writes A. E. Starke
of Hanover Kitchens, Ltd.
Hanover, Ontario, Canada

". . . they are working shorter hours . . . they have cleaned up the terrific back log of material that required edge banding when the IMA went into operation," Mr. Starke says.

"The IMA edge bander has been running nine hours a day since we put it into operation which is almost five months now, and the only item that we have replaced to date is one of the heating bands."

IMA is the only straight-line, completely automatic production machine that applies veneer and plastic edge strips to particle board, plywood or lumber cores.

For complete information phone, wire or write

wilco machine works, inc.

Box 3722HW • MEMPHIS 14, TENN • WH 8-4555

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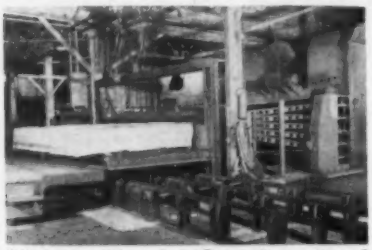

Veneer Feeder Synchronized With Drying System

Application. Feed veneer to dryer.

Advantages. Closely controlled operation to control quality.

Specifications. Steel transfer chains spaced for veneer packages in lengths of 51, 101 and 124-inch packages are powered by 3-hp gearmotor and controlled by feeder operator. They feed feeder lift which is mounted on rollers for easy adjustment to any of three veneer package lengths. Feeder lift positions and maintains packages at correct and convenient working level, making it simple for veneer to move in a single layer through spring-loaded neoprene-tires pinch wheels into feed tipple. Tipple feeds veneer into proper deck at time interval controlled by and synchronized with speed of dryer.

Manufacturer. Moore Dry Kiln Co., North Portland, Ore.

•

Sander Face Tilts To Meet Material

Application. Sanding.

Advantages. Table remains stationary; sanding disc assembly tilts.

Specifications. Tilting disc of the 14-inch unit combines the direct motor drive, sanding disc and safety guard. The work table always remains flat and level. Accurate finishing of curved or irregular-shaped pieces is provided by the wrap-around stationary table. It has machined and ground surface 20¾ inches wide with 9½-inch edge to disc depth, 3 inches beyond the disc on each side, and wrap-around surface 5⅛ by 3⅝ inches behind the disc. A handwheel controls the wide range of disc tilt from 15 degrees forward to 45 degrees back.

Manufacturer. Yates-American Machine Co., Beloit, Wis.

•

Automated Control With Memory System

Application. Automated control of grading, sorting, stamping or trimming operations on conveyed materials.

Advantages. Simplifies operation, reduces manpower requirement.

Specifications. Heart of Magnestat is magnetic memory disc turning in synchronization with product flow. Disc records control decisions, made manually by push-button console or automatically by limit switches, as magnetic impressions. Decision can be made at one point in production line, stored on magnetic disc to be automatically executed at the proper stage later in the production line. A typical installation is control of grade marking equipment. Operator stationed behind the push-button console makes decisions as to grade, moisture, etc., as rough cut lumber passes him on conveyor. He pushes button while board is in front of him to activate grade marker, or the correct saw in a battery of trim saws, or open the correct sorting gate, when the board reaches the selected position. Once this control has been executed, the magnetic area on the disc is erased, leaving a clean disc for the continuous operations.

Manufacturer. Republic Electric & Development Co., 2627 Western Avenue, Seattle 1, Wash.

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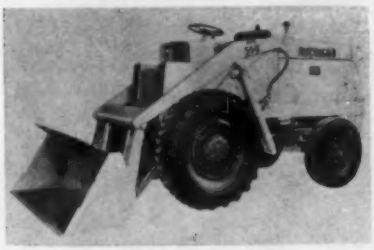

Tractor-Shovel Boosts Short Turning Radius

Application. Bulk material handling.

Advantages. Can turn in radius of 11 feet, two inches.

Specifications. Heavy-duty, rubber-tired with lift capacity of 5400 pounds. Can travel at 26 mph in forward or reverse, is powered by 66.5-hp gasoline engine. The Model 55B, like the all-wheel drive Model 55A, has the Michigan power train with torque converter and power shift. Working weight is 10,200 pounds.

Manufacturer. Construction Machinery division, Clark Equipment Co., Pipestone Road, Benton Harbor, Mich.

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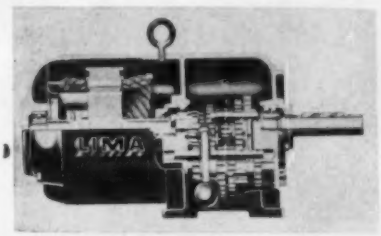

Gearshift Drive Mounts In Any Position

Application. Power transmission.

Advantages. Versatility of mounting.

Specifications. Lima Type R3 selective 4- or 8-speed gearshift drives design changes include stress-proof steel shafting in the motor and in the gear box, with hardened splines on the spline shaft. Countershaft roller bearings and spacers have been replaced with lifetime sintered bushings, and double width sealed and lubricated-for-life ball bearings have replaced single width bearings on the output shaft and the motor shaft. Type R3 is furnished with standard single-speed motors of 1800, 1200 and 900 rpm.

Manufacturer. Lima Electric Motor Co., Dept. 422, Lima, Ohio.

Automatic Lumber Sorter Works from Memory System

Application. Sorting lumber.

Advantages. Highly automatic, requiring less manpower.

Specifications. Push-button control allows operation by one man. The prototype unit recently demonstrated has five buttons, to correspond with the five trays into which the mixture of lumber is segregated. The buttons actuate a Redco "Magnestat" memory unit, synchronized with the conveyor line. Electrical impulses are stored on magnetic discs. When a particular piece of lumber reaches the gate to the corresponding tray, the gate is automatically tripped by a solenoid-actuated air cylinder to start the piece down gravity rollers into the pre-selected tray. The sorter is designed for unloading by selective tipple, directly into an automatic stacker or onto separate conveyors for subsequent processing, storage or shipment.

Manufacturer. Production Systems, Inc., 3670 East Marginal Way, Seattle 4, Wash. Production has not yet started.

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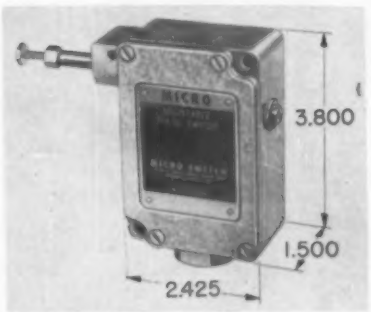


New Pulse-Producing Snap-Action Switch

Application. Where momentary opening and/or closing of circuit is necessary.

Advantages. Specially useful for controlling pneumatic valves where permanent-duty solenoids are not used.

Specifications. Entire pulse operation occurs as plunger is depressed; no switching action takes place on the plunger return stroke. Mechanical requirements include .150-inch maximum pretravel; .600-inch minimum total plunger travel, 4-pound operating force and 8-pound full overtravel force. Pulse length is adjustable from .030 to .450 inches; adjustable plunger can be extended .750 inch. Switch is sealed against oil, water, dust and dirt.

Manufacturer. Micro-Switch, Division of Minneapolis-Honeywell Regulator Co., Freeport, Ill.

•

Track Easily Applied To Plywood Lining

Application: Track strengthens wall construction and protects plywood lining in trucks.

Advantages: Quickly applied; protects plywood.

Specifications: Series E vertical track attaches with simple wood screws. Web straps, with fast action buckles, have new type fitting for the track. Strap end fittings are easily installed and removed with one hand operations.

Manufacturer: General Logistics division, Aeroquip Corp., 2929 Floyd St., Burbank, Calif.

•

Capacity, Speed Increased On Front-End Wheel Loader

Application. Materials handling.

Advantages. Bigger payloader handled faster.

Specifications. TL-12 has power reversing Tractomatic transmission with lever on steering column to control forward and reverse movement without stopping machine to clutch and shift gears. Four speeds forward, to 21.2 mph; four in reverse to 27.9 mph. Reverse speeds are about 30% faster than forward speed in same gear to permit faster loading cycle without shifting to higher gear. Loader has pneumatic coupling to provide flexible, vibration-free connection between engine flywheel and torque converter. Unit is available with Allis-Chalmers 77-hp gasoline or 76.5 hp diesel engines.

Manufacturer. Allis-Chalmers Manufacturing Co., Milwaukee 1, Wis.

Worm Gear Speed Reducer Line Is Air-Cooled

Application. Speed reducer.

Advantages. Large variety: 25 types with over 135 different sizes covering range from fractional to large horsepower as demanded.

Specifications. Ratios range from 5:1 to 3600:1, with torque ratings up to 135,000 pound-inches and horsepower ratings up to 150. They are right angle drives. Automatic lubrication is provided by a splash system between the reservoir and internally cast channels to the bearing except on the low-speed shaft, where grease fittings are provided. Oil seals are furnished on all shaft openings.

Manufacturer. Link-Belt Co., Prudential Plaza, Chicago 1, Ill.

•

New Light Weight Strapping Machine

Application. Strapping packages.

Advantages. Light, compact and fast.

Specifications. The 20-pound air-powered unit tensions, ties and cuts round steel strapping in three seconds. After threading the machine and draping the package, the operator merely turns a single control to tension, tie and cut the strapping.

Manufacturer. United States Steel Corp., 120 Montgomery Street, San Francisco 6, Calif.

•

Thin Line Log Skinner Keeps Constant Pressure

Application. Log barking.

Advantages. Constant tool pressure.

Specifications. Model is offered in 26, 30, 36, 42, 50 and 60-inch units. Construction is welded steel members for rigid unit that withstands extreme shock. Air pressure is retained; no air is exhausted to open or close debarker arms. There are no pressure plates or any other connection between the unit and an outside air source. The entering log automatically opens tools to proper barking position.

Manufacturer. Carl W. Mullis Engineering & Manufacturing Co., Lancaster, S. C. Distributed in northwest by L-M Equipment Co., Portland, Ore.

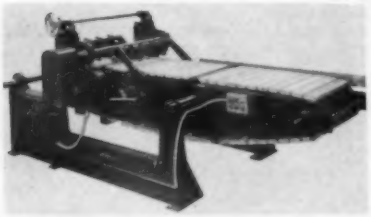
LeTourneau Log Stacker Improvements Told

Application. Mill yard handling.

Advantages. Further refinements of older model.

Specifications. Series F log stacker changes include: All structural components fabricated of heavy nickel-chrome alloy steel for added strength; mast reinforced; car structure has new wrap-around design; enclosed all-weather cab which allows full vision is now standard; swivel-type control panel and air cushioned seats added for interior to allow operator to turn to face the direction he wishes; demountable tusks and independently-operated cable kicker that removes all logs from the fork.

Manufacturer. R. G. LeTourneau, Inc., 2399 South MacArthur, Longview, Tex.



Slat Bed Multiple Cutup Machine Added

Application. Tenoner operation.

Advantages. Particularly suited for small to medium sized operation where bigger units are beyond cost budget and production requirements.

Specifications. Jenkins 140 Series slat bed unit is available in bed widths up to 96 inches, bed lengths up to 72 inches before holddowns. Unit incorporates Jenkins Oilomatic piston-type, solid-block chain with half-round laminated plastic bearing under every link running in half-round bearing bronze tracks. It will carry up to 20-hp on the dado shaft, has individually-spring-loaded rubber-covered holddown wheels mounted on adjustable parallelogram frame, aluminum backing bars behind every slat for stiffness, infinitely variable feed drive.

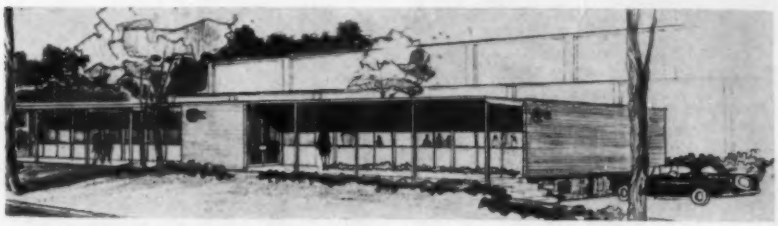
Manufacturer. Kohler-Joa Corp., Sheboygan Falls, Wis.

Clark Rental Rep

Top Line Equipment Co., Portland, Ore., has been appointed as a dealer in the area for the Clark Rental Corp., a subsidiary of Clark Equipment Co. Robert Dodd, president of Top Line, says his company will offer long and short term rental contracts for the Clark line under the rental system. Top Line continues as a franchised dealer for sales and service of the Clark line.

NEW QUARTERS of Projo Industrial Corp. at Grants Pass, Ore., are pictured here. Projo manufactures the Prow carriage drive and Projo salvage saws used throughout the lumber industry. The firm is headed by general manager Joe Krumholz.

WHITE MOTOR CO.'s recent Pacific Coast Regional meeting in San Francisco, Calif., attracted three executives of the firm, from left: J. N. Bauman, president; Karl A. Roesch, vice-president, Autocar division; Wilson D. Patterson, regional vice-president. At the meeting, the executives presented their 1960 program and previewed their complete line of trucks to personnel from branches, distributors and dealers in the west.



Coe Manufacturing Plans Portland, Ore., Facilities

Construction has started on the $300,000 warehouse and plant shown in the architect's rendering. Fred W. Fields, general manager of the company's western division, says the development will be located on a 10-acre tract in the Tigard industrial section south of Portland.

This is the second major move by Coe in recent months to provide completely integrated services on the west coast to the mushrooming plywood industry. Early, it purchased assets of its long-time sales and service representatives, Conway and Fields Sales Co. and Conway and Fields Parts Co., both Portland.

The office, a one-story frame and brick structure with liberal areas of glass, will be in the foreground. The 90x240-foot factory-warehouse will be located behind the office. Portions of the structure will rise 25 feet to accommodate an overhead crane.

New Group Directs Lovsted Organization

C. M. Lovsted, Inc., headed by Harvey J. C. Oster, Jr., as president and general manager, has assumed active management and taken over all operational facilities of C. M. Lovsted & Co., Seattle, Wn.

H. J. C. OSTER

The new corporation will continue as consulting engineers and manufacturers of Lovsted Direct-Flo lumber dry kilns, ovens, humidifiers, pole driers, lumber stackers and unstackers and other sawmill equipment. C. M. Lovsted, Inc., also manufactures "Toot-E" whistles and signal systems.

Other officers include William C. Schlothan, vice-president, who has been associated with Northern Machine & Marine Ways, Ketchikan, Alaska, for the past 10 years, and Herbert E. Reardon, secretary-treasurer, who most recently was associated with Cascade Lumber Co. and Boise Cascade Corp.

•

Western Gear Expanding

Western Gear Corp., Lynwood, Calif., has purchased the former U. S. Naval shipyard at Everett, Wash., and will spend a half million dollars to modernize and expand the facilities. When completed, the new facilities will allow Western Gear to relocate its Seattle industrial products division in new and bigger quarters.

•

Experimental Dry Kiln Installed at U of W

A modern, new Moore cross-circulation kiln, standard except that its height is limited to eight feet, has been installed at the University of Washington, Seattle, Wash., for use in teaching and research.

The 18x26-foot drying chamber is equipped with three 72-inch overhead fans on a single longitudinal shaft. A varying air-circulation rate is provided by a 7.5/1.9-hp, 2-speed motor. Automatic time-reversal controls change direction of fan rotation at predetermined intervals.

Research flexibility of the unit is increased by the Adjusto-Vent control which regulates ventilation. It can be set at the discretion of the operator.

EQUIPMENT AT WORK

R. G. LeTOURNEAU 30-ton electric wheel loader recently put to work at Schneider Lumber Co., Brownsville, Ore., does many jobs. The stacker dry decks during the day. At night the pond is used for storage by the night shift. A special bridge has been built over the log pond so the unit can move across to either side of the pond.

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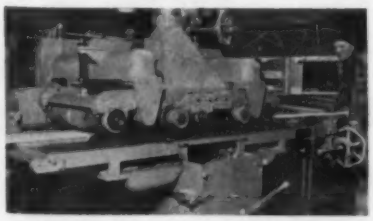
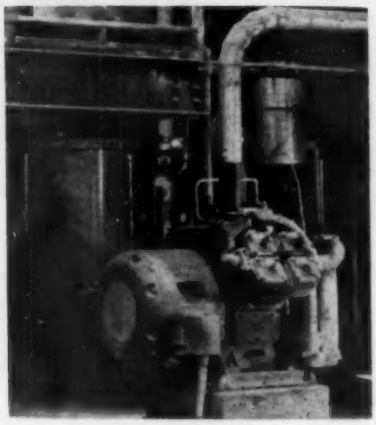


MEREEN-JOHNSON No. 441-A splitter at Potlatch Forests, Inc., Lewiston, Ida., saves manpower by doing two jobs: splitting and re-planing. The splitter rips boards to recover high grade, and at the same time its ⅛-inch splitting head planes the two pieces of lumber to standard width.

• • •

BECKER & VAN HUELLEN plywood press above was shown at the Hanover Fair in Hanover, Germany, early in May. It is a 550-ton unit with 24 openings. Platen size is 106x55 inches. The press is distributed in the United States by Karlton Machinery Corp., Chicago, Ill.



CLAYTON boiler is an important element in a system to insure uniformity of temperature of each hot press platen over its entire surface during the press cycle at Three Sisters Plywood Co., Albany, Ore. The integrated steam generating and steam flow system was engineered to meet critical requirements of a hot press operations. The steam generator heating the press produces an un-equalled dry steam via a centrifugal separation process, which releases its heat through the platen surface in 10 to 25% less time. The steam generator responds instantly to meet a sudden steam demand when the press closes. The steam flow system maintains a constant high velocity of steam through the platens, constantly purging them of all condensate and air, maintaining hot, dry steam in the platens at all times. Boiler was supplied by A. W. Mortenson Co., Portland, Ore.

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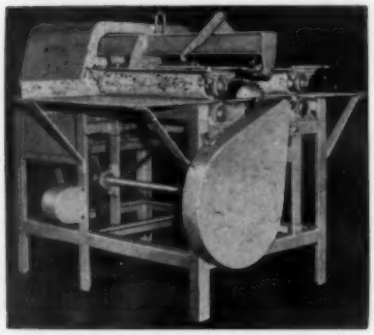

ANDRUS veneer gang rip saw is key unit in new plywood operation of Hult Lumber Co., Junction City, Ore. The machine developed by Andrus Machine Works, Eugene, is used for cutting patch stock. Open side design allows cuts up to three inches deep. The 12 saws allow flexibility in cutting any width of patch material.

• • •

PRENTICE veneer dryer in plant "B" of MacMillan, Bloedel & Powell River, Ltd., Vancouver, B. C., is said to be the largest in the world. The 6-deck automatic steam unit is 165 feet long, has 24 sections and weighs 600,000 pounds. Continuous flow, self-draining coil pipes are a design feature. Each of the 24 sections has a temperature gauge and balance valve to insure proper drainage of coils.

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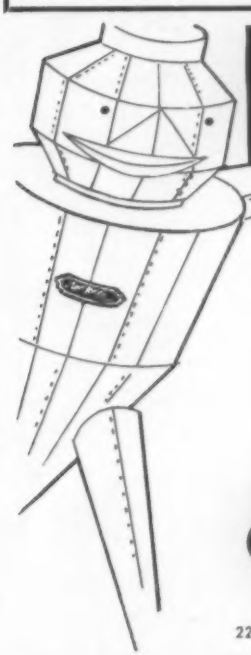

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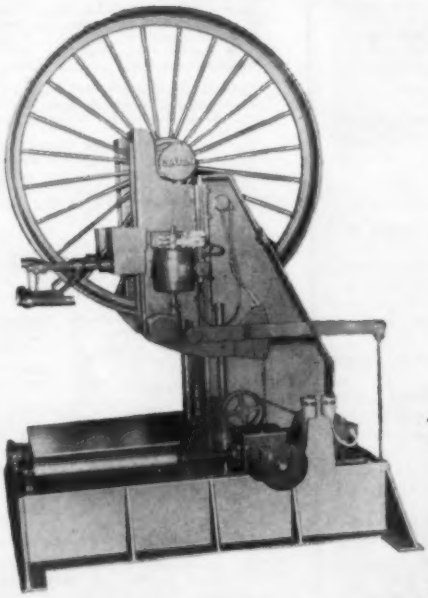

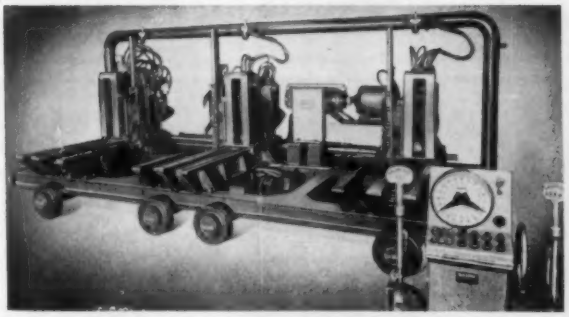

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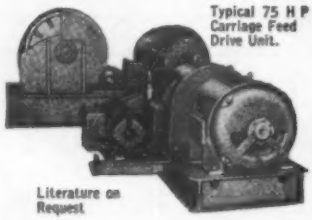

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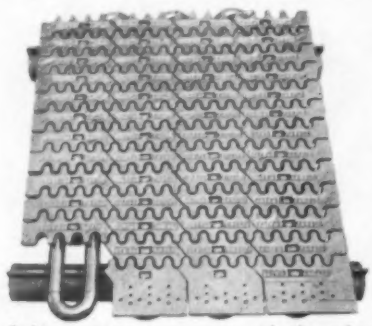

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Electric Steel Foundry Co., Portland; Seattle. Spokane
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Mann-Russell, Inc., Tacoma, Wash.
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Stetson-Ross Machine Co., Seattle

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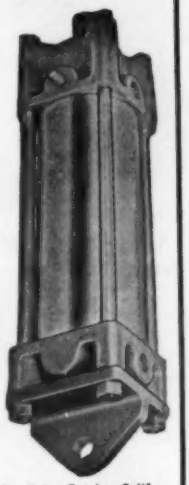

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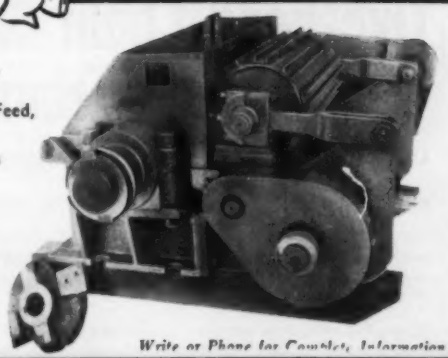

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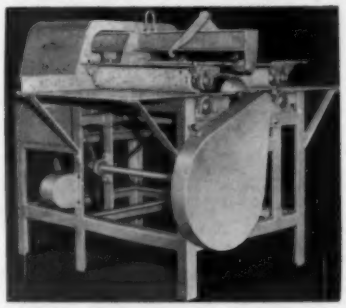

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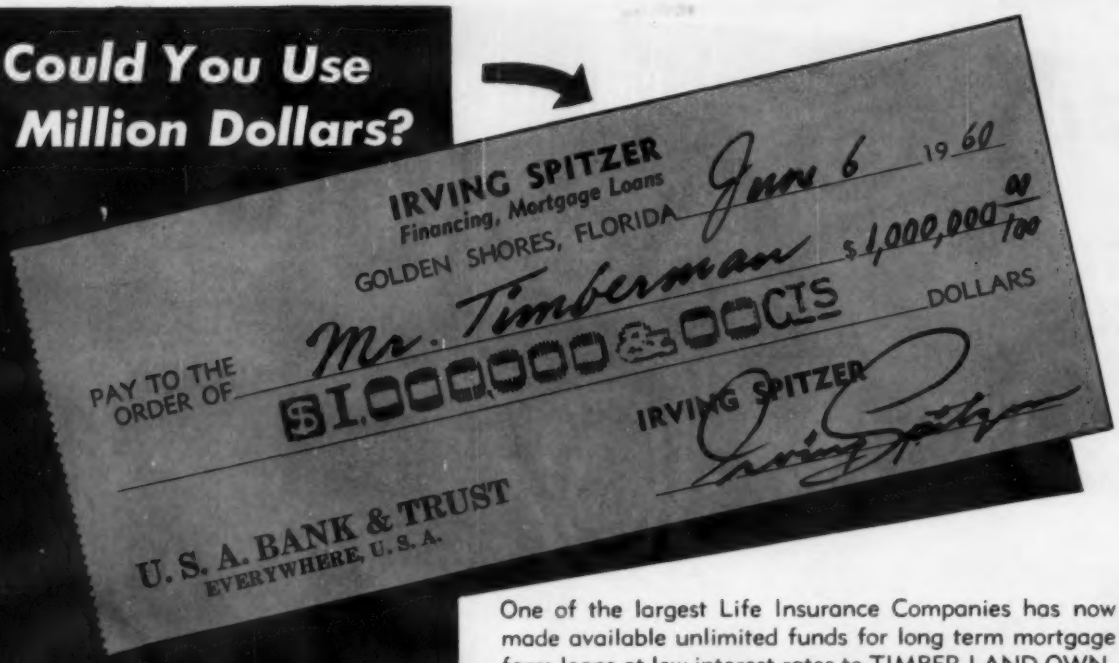

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McDonough Mfg. Co., Eau Claire, Wis.
Mereen-Johnson Machine Co., Minneapolis
Mill Equipment, Inc., Seattle
Monarch Forge & Machine Works, Portland
National Machinery Sales, Gold Hill, Ore.
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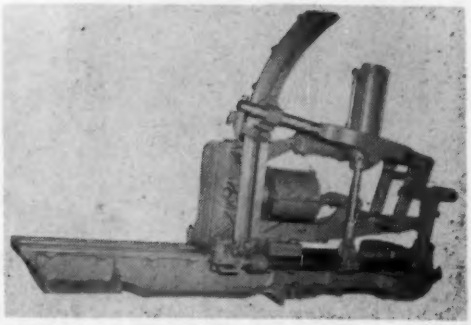

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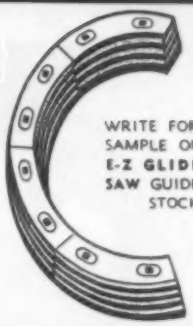

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Tyee Machinery Co., Seattle, Wash.
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Western Machinery Corp., Portland
Western Steel & Supply Co., Dallas, Ore.
The Wheland Company, Chattanooga, Tenn.
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Zidell Machinery & Supply Co., Portland

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Mater Machine Works, Corvallis, Ore.
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Monarch Forge & Mach. Wks., Portland, Ore.
Sel-Set Machinery Corp., Salem, Ore.
M. A. Ward Const. Co., Inc., Eugene, Ore.

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Sumner Iron Works, Everett, Wash.

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L-M Equipment Company, Portland, Ore.

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The Falk Corporation, Milwaukee, Wis.
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Lovsted & Co., Inc., C. M., Seattle, Wn.
Moore Dry Kiln, Portland; Jacksonville, Fla.
Stetson-Ross Machine Co., Inc., Seattle

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General Tire & Rubber Co., Akron, Ohio; Portland
B. F. Goodrich Co., Akron, Ohio; Portland; Seattle
Goodyear Tire & Rubber Co., Akron, Ohio; Portland; Seattle
U. S. Rubber Company, New York City; Portland; Seattle

TORQUE CONVERTERS
Schneider Div. of Westinghouse, Muncie, Ind.
Western Gear Works, Seattle

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Caterpillar Tractor Co., Portland; Seattle; San Francisco; Peoria, Ill.
John Deere Co., Moline, Ill.
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R. G. LeTourneau, Inc., Longview, Texas
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Peerless Trailer & Truck Service, Portland, Ore.
Reliance Trailer & Truck Co., San Francisco

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Irvington Machine Works, Portland, Ore.
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Stetson-Ross Machine Co., Inc., Seattle
Klamath Iron Works, Klamath Falls, Ore.
Klamath Machine & Locomotive Works, Klamath Falls, Ore.
Sumner Iron Works, Everett, Wash.; Vanc., B.C.

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Greenlee Bros. & Co., Rockford, Ill.
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Stetson-Ross Machine Co., Seattle, Wash.
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USED EQUIPMENT FOR SALE

1 360' 1¾x10" Esco Log Haul Chain and 30 4-point chairs and 5-Tooth drive sprocket

1 Carriage, 3-Block, 72" opening, Sumner, Trout set-works, off-set

1 Twin Feed, 10"x12" Sumner with 44" 15-groove drum

1 Edger, Allis Chalmers 10"x60", 6-saw with direct connected 200 h.p. 1200 rpm 440 V. motor

1 Log turner, 3-arm 5-15/16" shaft with 12x24" steam cylinder

1 Tower edger, 42"x4", one-saw, handset

1 Lath stripper, Sumner 5-saw, steel frame, including 40 h.p. direct drive

1 Lath bolter, Wicks type A, 3-saw

4 Band head saws, 60 foot, 11 gauge, 16", like new

4 Band resaws, 31 foot, 16 gauge, 10"

1 Motor, saw-arbor, 7½ h.p., 3600 rpm, 200/440, new

1 Trim saw, Yates 60", ball bearing arbor, 3 h.p. motor, excellent condition

2 Trim saws, Sumner 40", 4.2 h.p. motors

1 Reduction motor, 3 h.p., 1740/125 rpm, Fairbanks-Morse, Falk reducer.

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BUYERS GUIDE SECTION

ALL ELECTRIC LOG GANG MILL

BUCHANAN LUMBER CO., Olympia, Wash.

This mill has a capacity of 150,000 b.f. per shift. All electric equipment is 3/60/440. This mill will be in operation until July 1st, 1960. Come and see it run and make arrangements to buy now for delivery after July 1st, 1960.

Being Sold By GOLDSTEIN & BLOCH — Phone LEnox 2-1234 — Aberdeen, Washington

1—30" Mill Engineering Log Gang with 150 HP motor, chipper, carriage, feed motor, saws and all starting equipment (12 years old)

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1—8x48 I. W. Johnson Edger with 4 power shifters, 200 HP drive motor direct, feed motor, double feed rolls, air operated press rolls. 10—26" saws and all controls. (3 years old)

1—6x36 I. W. Johnson Edger with 3 power shifters, 100 HP drive motor direct, feed motor, double feed rolls, air operated press rolls, 2—24" saws and all starting equipment. (4 years old)

1—32' I. W. Johnson Air Trimmer, R.H. 17 saws, BB arbors, V belt drives, 32" blades, 50 HP drive motor, steel box beam, 10' table with H78 chain and 10 HP drive

1—4 saw slasher—4' spacing, 40 HP drive motor, 2 15/16" arbors, all electric controls

1—#145 Diamond BB Hog with 100 HP drive motor and controls

1—#736 Hanchett circle saw grinder motorized, late style

1—#22 Armstrong motorized gang saw grinder, late style

1—300 amp Wilson electric welder

1—Edger hand gummer, motorized

CONVEYORS

250'—24" belt with trough rolls, complete with 7½ HP 68 RPM U.S. Syncrogear
100'—H122 chain complete with 5 HP 45 RPM U.S. Syncrogear
170'—1x6 round link chain with 24" Moline flights every 5' with 10 HP 30 RPM Westinghouse gearhead
260'—1x6 round link chain with 24" Moline flights every 5' with 10 HP 30 RPM U.S. Syncrogear
5 conveyors with H104 chain, driven with U.S. Syncrogears
2 Log Hauls complete, each with 250' of 7/8-5 round link chain
42—3 point chairs driven with 20 HP motors and controls

ROLL CASES

9—8x40x1 15/16" driven with 1"p RC
8—8x48x1 15/16" driven with 588 chain
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10—6x20x1 15/16" driven with 1"p RC
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LEAD THE FIELD

Over 100 operating in U.S.
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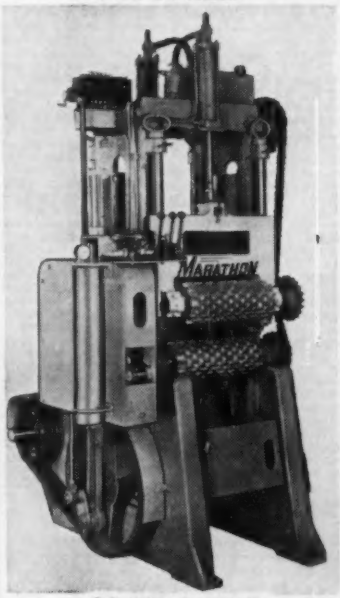

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P.S. The MARATHON #240 sold so well that we have following used trade-in bargains.
#120-20x20 plain br'g—$3950.00
#120-20x20 ball br'g—$4750.00
#200-13x20 ball br'g—$4500.00

—— The Lumberman's Classified Advertising Section ——

Largest stock of new and used

SAWMILL MACHINERY

See our list of used machinery Page 86 FEBRUARY THE LUMBERMAN

THE PORTLAND MACHINERY CO.

208 S. W. First Ave., Portland, Oregon. CA 8-9633

SALE OF TIMBER
YAKIMA INDIAN RESERVATION

Sealed bids, in duplicate, on forms provided therefor, marked outside "Bid, Soda Springs Logging Unit," addressed to the Superintendent, Yakima Indian Agency, Toppenish, Washington, will be received until 1:00 P.M., Pacific Standard Time, June 1, 1960, and will be considered the equivalent of oral auction bids and posted for the information of all bidders. Oral auction bids will be received by the Superintendent, Yakima Indian Agency, beginning at 2:00 P.M., Pacific Standard Time, June 1, 1960, for the purchase of timber on a tract within the Yakima Indian Reservation described as the "Soda Springs Logging Unit." The oral auction bidding will be restricted to those who have previously submitted an acceptable sealed bid in accordance with this notice. The Unit includes approximately 10,050 acres, of which approximately 5,775 acres of ponderosa pine and mixed ponderosa pine and Douglas fir timber lands are to be logged. The area to be logged has a total estimated stand to be cut of approximately 15,500,000 feet B.M. of ponderosa pine, 8,012,000 feet B.M. of Douglas fir and larch and 3,988,000 of white fir, which estimate is not guaranteed, of which approximately 1,406,000 feet B.M. stands on 398 acres of timbered trust allotments for which separate approved contracts must afterwards be made with allottees desiring to sell and on terms similar to the contract for the unallotted timber. Each bidder must state the price per thousand feet B.M. Scribner Decimal C Log Scale that will be paid for timber cut and scaled prior to any readjustment of rates as specified in the contract. No bid will be considered for less than $22.50 per thousand feet B.M. for ponderosa pine, $6.80 per thousand feet B.M. for Douglas fir and larch, $2.05 per thousand feet B.M. for white fir. A certified check for Thirty Thousand Dollars ($30,000.00), on a solvent bank, payable to the Bureau of Indian Affairs, must accompany each sealed bid. Persons bidding for or on behalf of companies, corporations, or partnerships must at the time of bidding submit in writing conclusive evidence of their authority to do so. The deposit will be returned to the unsuccessful bidders. The deposit of the successful bidder will be applied as part of the purchase price against timber cut on this unit only, or retained as liquidated damages if the bidder shall not execute the contract and furnish satisfactory bond for fifty thousand dollars ($50,000.00) within sixty days from acceptance of his bid. If an oral bid is declared to be high at the close of the auction, the bidder must immediately confirm the bid by submitting it in writing on a Bureau of Indian Affairs bid form. The right to waive technical defects and to reject any and all bids is reserved. The contract will specify that all designated timber shall be cut and paid for prior to December 31, 1964, and will require construction of an access road. Advance payments will be required on each individual allotment contract as stipulated in the contract covering the entire unit. The first advance payment must be made within thirty days of approval of the individual allotment contract. Before bids are submitted, full information covering the timber, the conditions of the sale, and the submission of bids, should be obtained from the Superintendent, Yakima Indian Agency, Toppenish, Washington, or the Area Director, Bureau of Indian Affairs, P. O. Box 4007, Portland 8, Oregon. Dated this 24th day of March, 1960, Glenn L. Emmons, Commissioner of Indian Affairs, Washington 25, D. C.

12" MATTISON MOULDER #226,
Near New Condition, B.B. Elec.
INDEPENDENT STAVE CO.,
LEBANON, MISSOURI

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IF YOU ARE THINKING ABOUT BUYING A GANG SAW WE CAN SAVE YOU OVER $6,000. LIKE NEW THROUGHOUT.

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USED PLANING MILL MACHINERY
HARRY G. BLAKE
P.O. Box 327 Gearhart, Oregon
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1—American #110 54" Band Resaw, tilt rolls, B.B., 40 HP.
1—American #26 Sticker 12", Conv. B.B., 25 HP.

HALL MACHINERY COMPANY
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2 good resaws for sale, complete with motors, drives, and starters. One Mershon 54", one Fay & Egan 42". Both are rebuilt with ball bearings, variable feed and air pressure rolls. Priced to sell.

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8 ft. Diamond, R.H., roller bearing wheels, like new, air guide lift, price $5950.00

3 acres of used sawmill machinery.

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If you have a 36"x24" super Swedish gang saw we have a fine stock of new parts available.

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WOOD MOULDING PLANT IN WISCONSIN. NEW MACHINERY. OPERATING. PLENTIFUL LABOR AT FAVORABLE RATES. WILL SELL COMPLETE OR PART INTEREST. FOR INFORMATION

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WANTED

Logging Superintendent for large pine operation, well qualified in production methods, maintenance and business experience. Resume and references in first reply.

Write TL Box 461, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

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WANTED — OPERATING ENGINEER

Southern Interior British Columbia Lumber Mill. $175,000.00 handles 50% interest. 10,000,000 F.B.M. production. Excellent timber supply.

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Forestry graduate 31, 9 years mill sales and production experience, WPA species. Desires challenging position with lumber manufacturer, U.S. or Canada.

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Large Midwest Wholesaler interested in short term financing in exchange for lumber shipments.

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POSITION WANTED

Currently employed, experienced Plywood Superintendent, capable production, work scheduling, all phases manufacturing. Locate any area. Resume on request.

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AVAILABLE

Lumberman, Age 36, with 9 years experience as shipping clerk—planer and yard foreman. Excellent reference. Resume on request.

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A BIG BUY IN PLANING MILL

Planing mill and resaw, up to date, all electrical power conveyors and green chain, sawdust burner, buildings, two trucks, two hysters, located Denver area on 20 acres of ground, with portable sawmill backed by approximately 8 million feet Spruce timber. Capacity 40,000 feet daily 1 shift.

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WANTED — STEAM ENGINE

14"x16" twin horizontal. 72" to 84"x24" flywheel. Write or call:

Guy Roberts Lumber Co.,
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USED MACHINERY VALUES

7' Sumner r.b. band mill, R.H.
9' Sumner r.b. band mill, R.H.
10' Filer & Stowell band mill
20" x 48" Wickes #1 cant. gang saw
8' Filer & Stowell horizontal slab resaw
20' Klamath carriage, 60" blocks, excellent
20' med. weight steel carriage, 48" blocks
24' Portland all steel saw mill trimmer, 13-saw
84" Sumner r.b. motorized resaw
60" Yates-American V-60 band resaw, r.b.
30" x 14" #55 Buss double surfacer, m.d.
3 Moore 103' cross circulation dry kilns
15" Stetson-Ross 17-A1 10-knife elec. planer, d.p.
20" Stetson-Ross 17-A1 6-knife electric planer
6" #272 Mattison electric moulder
10" #229 Mattison 5-head electric moulder
8" Stetson-Ross 10-knife high speed elec. moulder
49" Yates-American 3-drum motorized b.b. sander
#435H Mereen-Johnson 16' equalizer, 14-saw
43" x 72" Gillespie electronic edge gluer
Western b.b. gang rip, 30" arbor space, 25 h.p.
Hermance 12" b.b. detail sticker

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1. Stetson Ross 25" Blanker Model 6-12-CH6-2 complete with 7 Roll Feed Table and drives. Will negotiate to sell or swap for 24" Double Faced Profile Machine of late model.

DIAMOND NATIONAL CORPORATION
W. G. Wallin
Post Office Box "D"
Red Bluff, California

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Scougal Rubber Mfg. Co. ---------99
Seattle Boiler Works, Inc.-------100
Shell Oil Co.----------3
Signode Steel Strapping Co.-------32
Simonds Saw & Steel Co.----------5
Simonds Abrasive Co. Div. -----13
Smythe Co., Ray----------96
Soderhamn Machine Mfg. Co. ----82
Spear & Jackson----------89
Spitzer, Irving ----------101
Square D Co.----------15
Standard Dry Kiln Co. ----------60
Standard Oil Co. of California-----9
Stewart-Warner Corp. ----------34
Suburban Gas ----------Cov. 2
Sumner Iron Works----------26
Sweed Mills, Inc. ----------50

T

Taecke Son & Co.----------107
Texaco, Inc. ----------35
Thompson & Holmberg, Inc.------101
Timberman's Engineering Co.----101
Tyee Machinery Co. ----------106

U

Union Oil Co. of California-------23
U. S. Steel Supply Div. of United States Steel----------25

W

Ward Construction Co., Inc., M. A.----------101
Washington Iron Works----------30
Weaver Co., Inc., Charles--------96
Western Foundry Co. ----------98
White Motor Co., Autocar Div.----56
Wilco Machine Works, Inc.--------90
Williams-White & Co.----------24
Wilson Dry Kiln Co.----------100
Wood Treating Chemicals Co.------78
Woods Machine Co., S. A.---------52
World Wood ----------19

Y

Yakima Indian Reservation------106

Z

Zidell Machinery & Supply Co.-----98

While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in this index.

FOR SALE

Yates-Am A-62 15" P & M B D 8 K Prof
Yates-Am A-66 15" P & M Dir Elec 8 K
Yates-Am A-20 15" P & M B D 6 K Prof
Yates-Am A-20 20" P & M Dir Elec 6 K
Woods #412 15" P & M B D 8 K Prof
Woods 412 M 15" P & M Dir Elec 6 K

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Important saw manufacturer in Belgium wishes to enter in relations with importers possessing good contacts with sawmills for selling its products.

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FOR LUMBER:

450 cu. ft. Ingersoll Rand air compressor in top condition, $4,000.00. HD7 with hydraulic Baker angle dozer in average to good condition, $2,000.00.

Hughes Enterprises, Box 99, Jackson Hole, Wyoming. Phone 940.

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★ *Priced for Quick Sale* ★

1 D4 Cat Tractor 2T Series
3 D4 Cat Tractors 7U Series
1 D7 Cat Tractor 3T Series
2 D6 Cat Tractors 9U Series
2 HD9B Allis Chalmers Tractors

1 John Deere Tractor Model 420G
1 TD9 Tractor Serial CB 2257977
1 Blue Ox Log Skidder
2 67R Hyster Log Arch
3 7D6TT Hyster Log Arch

2 Carco Logging Arch
3 1956 Ford Tandem Log Trucks
1 Gas Farmall Tractor
1 Diesel Farmall Tractor
1 Low Boy Float

★ *Price on Application*

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P. O. Box 698 • Telephone AL 6-2266 • Sault Ste. Marie, Ontario, Canada

All in a day's work

Stan Was Faster

"All in a day's work," said associate editor Stanley Jepsen when he crossed trails with this diamond-back rattler in Alachua County, Florida. Stan had no quarrel with the snake and fortunately he was quicker on the draw. All Stan was trying to do was to secure an article on pulpwood handling at the Owens-Illinois operations.

Editor's Talk, Too!

Sometimes advertisers find it helpful to call on the editor to help inform their own staff on industry developments and to find out how best to merchandise their own advertising—it's all in a day's work. Recently Suburban Gas called in Dean Sherman to talk over such problems with their western branch managers at Eugene, Ore. "We'll get you there," Dean (right, below) told the men, "but you'll have to deliver what your advertising says you will."

We Win Two Firsts

Occasionally your editors receive recognition within their own ranks for their efforts and burning of the midnight oil.

Recently THE LUMBERMAN received two coveted FIRST awards from the Western Society of Business Publications at the 9th Awards of Merit Competition.

One first award was presented for the best feature article during 1959, the other for the most outstanding special issue.

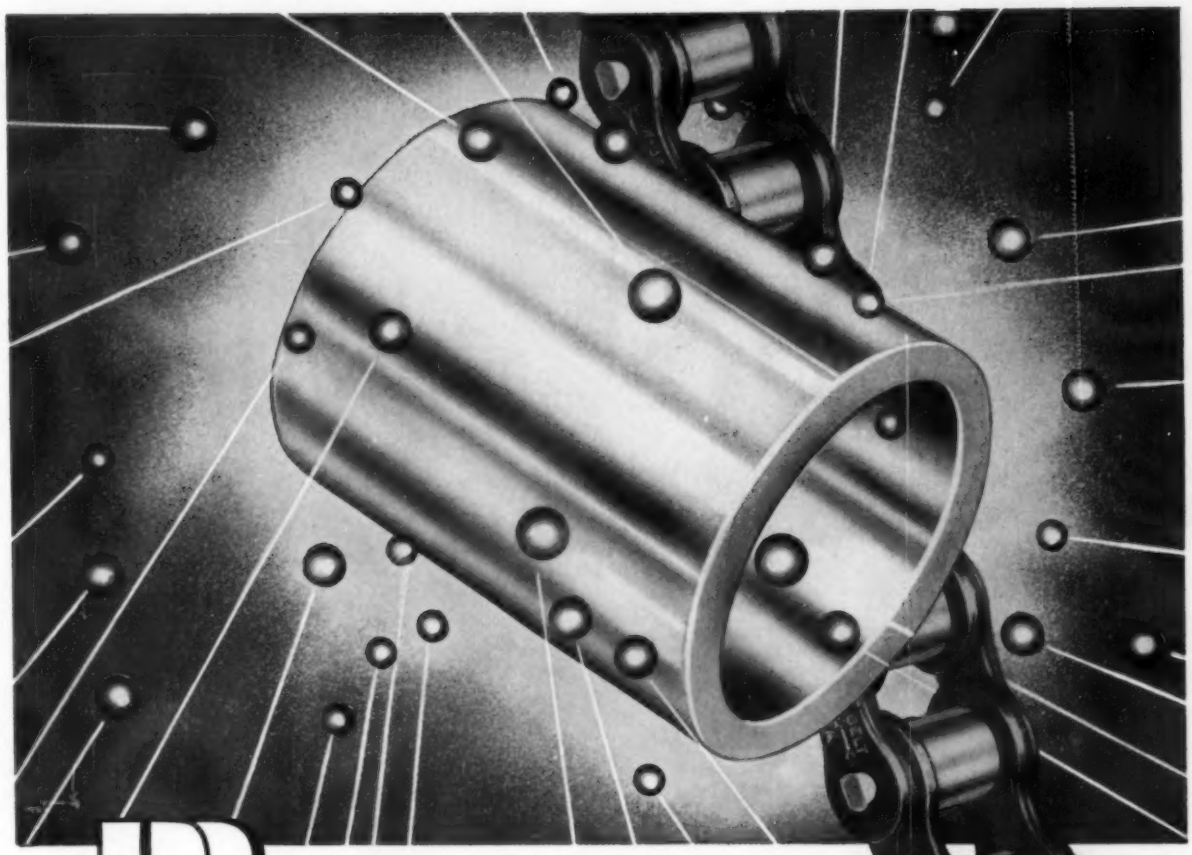
The citation for the outstanding feature article on the "Seasoning Controversy" was for the four-part series that ran in the March-April-May and December issues. The award read in part: "For an outstanding example of editorial enterprise, courage, skill and leadership which in the opinion of the judges is too rare in business publication field."

Citation for the outstanding 29th Annual Plywood Review, special issue read: "THE LUMBERMAN produced a nearly encyclopedic account of manufacturing and uses of plywood in its many forms. In addition to serving the trade with its regular circulation, supplemental copies were additionally sent to architects, builders and other customers of the industry."

We are proud and grateful to receive these valued awards of recognition for our efforts in contributing to the welfare, growth and development of the forest products industries.

Receiving plaques for THE LUMBERMAN at Los Angeles awards dinner was Raul Rodriguez, right, Miller Freeman Publications branch manager. Presentation was by William Lane, Jr., publisher of SUNSET.

Below, editor Dean Sherman, left, and managing editor Lee Flatberg discuss winning articles.



Rollers
fortified against fatigue

Shot-peening "cold-works" extra fatigue life into LINK-BELT roller chain

Shot-peening gives rollers of Link-Belt precision steel roller chain exceptional strength and stamina. And after shot-peening, they are burnished rather than ground or sanded. This achieves a SILVER-BRITE finish—and more important, *retains the fatigue resistant qualities of shot-peening.*

Other long-life "extras" of Link-Belt roller chain include: close heat-treat control, lock-type bushings, pre-stressing, pitch-hole preparation. For details, see Book 2657.

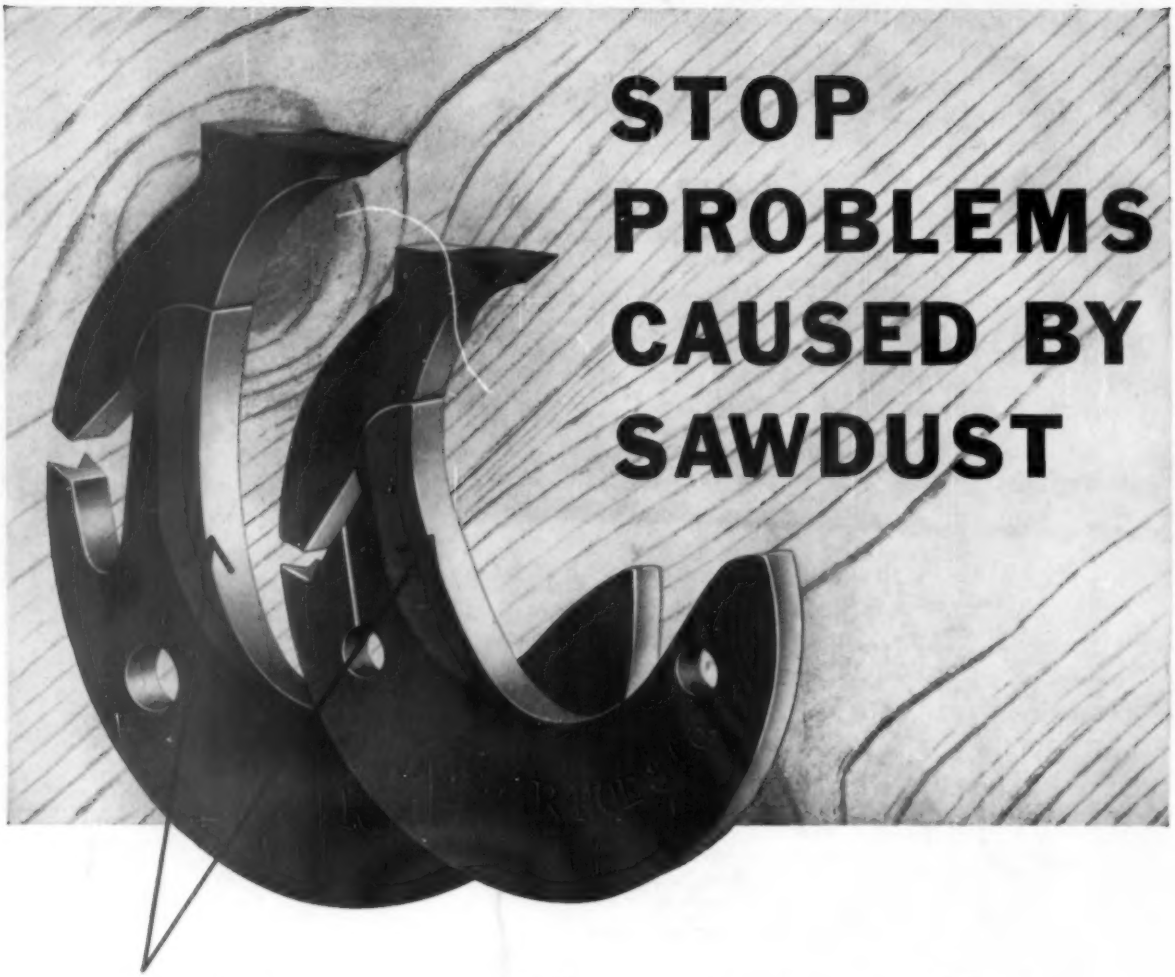
LONG LIFE AHEAD! Rollers for Link-Belt precision steel roller chain tumble out of shot-peening machine after being cold-worked to withstand punishment of today's high-speeds and heavy loads.

LINK-BELT

ROLLER CHAINS AND SPROCKETS

LINK-BELT COMPANY: To Serve Industry There Are Link-Belt Plants, Warehouses and District Sales Offices at San Francisco 24, Los Angeles 22 (Montebello), Seattle 4. Warehouses and District Sales Offices at Portland 10, Spokane 10, Salt Lake City 1. Stock Carrying Distributors in Principal Areas. 15,081

BOOK 2657 has 154 pages of roller chain data. For your copy, contact your nearest Link-Belt office or authorized stock-carrying distributor. (See CHAINS in the yellow pages of your phone book.)



STOP PROBLEMS CAUSED BY SAWDUST

Exclusive tapered flange design on Hoe's new shank carries away all sawdust

When your saw binds, heats, or starts making a rough cut, there's a good chance that sawdust has slipped down the side of the saw and packed against the log. When this happens, the saw can get so out of line that it cuts inaccurately. To stop these dust-caused problems, Hoe has designed a new shank with tapered flange. The flange is absolutely central . . . permits freer cutting . . . will not pinch . . . it quickly and thoroughly discharges all sawdust . . . sharp edge on inner circle easily maintained.

Hoe's bits and shanks have consistently outperformed all others. Today they are harder, yet tougher, than ever—thanks to a new heat treat-tempering system worked out by Hoe engineers. It assures a consistency of hardness never possible before . . . for better performance at high speeds and better resistance to shock and wear.

Hoe "fully blued" Bits have no equal for corner holding qualities—look for them—they typify the kind of engineering leadership you come to expect from the foremost—and oldest—saw manufacturer in the country.

For complete information, write to:

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